



405 ALIVE

THE MAGAZINE FOR ALL WHO ENJOY
THE CLASSIC ERA OF TELEVISION

SPECIAL EDITION: THE BEST OF ISSUES 1 - 4.

Editor Andrew Emmerson, G8PTH

Inside: 116 pages packed solid with
letters and articles on

- old programmes
- Test Cards
- musical themes
- TV receivers
- restoration techniques
- advertising
- re-issued programmes

INTRODUCTORY PRICE £5



ABOUT THIS BOOK

This publication has been produced by low-cost means in order to make it available at a realistic price to a specialised readership. We hope you will make allowances for this.

Making *economic* arrangements to promote and distribute a publication such as this is almost impossible. Any assistance you can give will be much appreciated and may lead to further publications of this kind.

Further copies of this book are available from the address at the foot of the page.

Please note that any special offers, subscription rates and other details may well have changed since these issues were first published!

ABOUT 405 ALIVE

405 *Alive* is a not-for-profit magazine with a small but enthusiastic readership. Many of us also belong to the British Vintage Wireless Society, the Vintage Radio Circle, the Royal Television Society and the British Amateur Television Club.

The shared interest is the TV programmes and technology of years gone by. Some of us enjoy collecting and renovating old TV receivers, cameras and so on, while we also have people who collect old TV programmes, commercials, literature, etc..

Whilst the magazine is deliberately informal so as to have the widest appeal, several 405 *Alivers* are professionally engaged as curators, historians and so on in this field. In the 405 *Alive* context, however, we are all "off duty" and doing what we do for pleasure. As this effort is all voluntary we tend to fairly well motivated!

As a body we are keen to co-operate with institutional bodies working in the same fields, and in several cases some of their staff are 405 *Alive* subscribers on a personal basis.

So what do we do with all the equipment we salvage? We tend to restore and keep it at home, bringing it out for occasional exhibitions and displays. One of our people has a complete ex-BBC outside broadcast vehicle which he trundles out two or three times a year!

One way in which several 405 *Alivers* have been able to assist the broadcast industry is by lending old TV receivers for use in period programmes, also by transferring video material off obsolete tape formats (e.g. obscure early reel-to-reel formats). We have also found old TV programmes and commercials, including some "lost" material which has been lent back to the broadcasters for copying. Some readers also have comprehensive libraries of books on broadcasting and service manuals for obsolete equipment which they will lend or photocopy.

For further information send a stamped addressed envelope to 405 *ALIVE*, 71 Falcutt way, Northampton, NN2 8PH or ring 0604-844130.

405 ALIVE

The Newsletter of
the 405 Line Group.

ISSUE 1, March 1989.

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FROM THE EDITOR

Welcome to the first issue of 405 Alive - I hope you like it. In truth it is very much an experiment but I have been encouraged by the great support I have received from the founder subscribers. With your continued support I am sure we can make a go of this!

The idea started with a letter sent to a couple of dozen of you whom I personally knew were seriously interested in 405 line TV and the like. If you wrote in response to my letter in **Television**, then this is also for you (apologies for any delay in replying but obviously it took a while to produce this newsletter.

But why? Well, it seemed to me that a properly organised 405 line circle or "interest group" was long overdue. It is clear there is now a growing interest in old TV technology and broadcast history, without a proper outlet. To some extent the field is covered by the British Vintage Wireless Society (BVWS) and the British Amateur Television Club (BATC), and we support both these excellent organisations. However, not everyone belongs to these groups, nor can they allot a large amount of space to our specific interests. So it seemed a good idea to start a newsletter which could devote itself exclusively to these topics - your support will prove it!

If 405 line television is an obsolete technique, why is there still so much interest in the subject? Difficult to say but it is clear that plenty of people get enjoyment from collecting, restoring and maintaining old TV equipment, while others find considerable interest in the history of the technology. Yet more folk are building standards converters and other equipment, using the latest technology. So this interest is far from pointless and we all need to keep in touch!

As you may know, this is not the first 405 line circle. A previous one was ready to start but for various reasons had to cease. I am pleased that the new group has the support of the founder of the old organisation, Bill Journeaux, and Bill has been most generous in helping establish this new one.

Our start will inevitably be modest. At this stage there will be just the newsletter, issued four times a year (assuming the material flows in). Beyond this nothing! No formal society, no red tape, no elected officers, no committee meetings, no formal activities. If people wish to organise these later that's fine by me, but for now the priority is getting the information circulating. Moreover, I personally cannot spare the time to be involved in any more "committee work"; as some of you may know I am already involved in far too many spare-time occupations for my own good!

That's the end of the sermon, now enjoy!

Andy Emmerson.

LETTERS, WE GET LETTERS ...

From Terry Hayes, Forest Row:

I think it is a great idea to set up a 405/TV history group. I have been collecting books, magazines, etc. on TV history for many years - these include an almost complete collection of Practical Television dating from 1955 and early TV and Radio Times, including a pre-war television supplement.

From Douglas Byrne, the Wireless Museum:

Very good idea OM. Best 73 de G3KPO.

From David Boynes:

This week I effected an improvement to my prototype 625->405 line standards converter with the addition of a 64 uS line delay unit. I have introduced a simple interpolator into the circuit and the results are good, improving vertical resolution and removing unpleasant stepping effects on sloping objects, etc... Let's hope the 405 line circle is a success.

I believe David is being unduly modest about the results with his new converter. Hopefully he will show it at Harpenden this year and write a fuller description for us. [AE].

From Bob Warren, 90 Tudor Road, Hampton, Middx., TW12 2NF:

My interest in 405 line activities is limited to the aspiration to have one of the antique cameras I have collected for my employers, Thames Television, running on 405 lines. *[These cameras are now in the Bradford museum.]* This is because that I feel that many of the younger generation have never experienced this venerable standard, complete with high-pitched whistle, and that most older people have forgotten what its good and bad points were like. This would most likely be done with a relatively recent design of camera, say an EMI 203, circa 1962, which would be reasonably easy to maintain in working order, driven by an early Thorn SPG and displayed on an Peto Scott monitor of similar vintage. So far I have done nothing about this because of pressure of work but I have all this gear in store.

One thought: true 405 line transmission, that is where the origination equipment was working on that standard, actually finished in the late 1960s when the UHF network began for BBC1 and ITV. After that any 405 line signal was a 625 line conversion and in a way impure. Hardly a profound observation, but it does mean that genuine 405 lines has been dead for 20 years!

Does anyone collect 819 line sets? Have you any special interests? Have you any research requests? Just write in and we'll publish your letter.

WILL THIS ISSUE BE YOUR LAST?!?

This first issue is sent to you *without any obligation*: in other words you do not need to send any money if it's not your cup of tea (just bin it then or give it to a friend!). But if (as I hope) you can't wait to receive more, this is what you do ...

You send me three A4-size stamped addressed envelopes and a cheque for £5 (made out to A. N. Emmerson). This will pay for this issue plus three more: and doing it this way involves me in the minimum amount of admin work. Please follow these instructions exactly: there is no spare time to spend on writing letters. After a year we will see how things are going and whether £5 is sufficient. If things go as I expect, the newsletter will get much bigger; if it doesn't £5 may be too much and you'll get a reduced rate next year. In short, both you and I are taking a gamble but I think it will work!

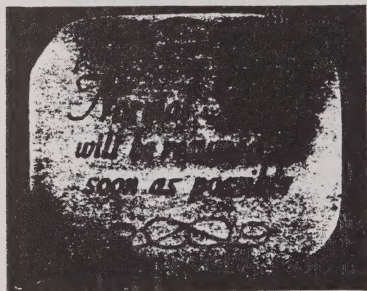
EQUIPMENT REGISTER

Brian Summers is organising a register of people with old broadcast camera and similar equipment to record who owns what, to help locate spare parts and circuit information and help owners find good homes for unwanted equipment (e.g. donating to recognised museums).

There is no charge though any donations will be welcome; you can get details by sending a SAE to Brian at 29 Perivale Grange, Perivale Lane, Greenford, Middx., UB6 8TN.

Brian notes that taking a long-term view of things it is interesting to note that certain cameras cannot now be bought at any price, yet they used to hard to give away. Marconi Mk IIs and Mk IIIs are hard to find and Mk IVs are like hens' teeth. How long before Pye Mk IVs and Mk Vs are unobtainable? Has anyone got an EMI 204 or and Ampex Quad VTR?

December, 1949 **Wireless World**



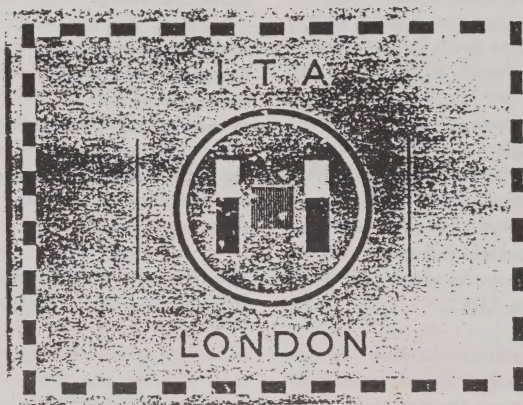
A very familiar caption on BBC during the late 1940s and early 1950s! Originally it was produced by a Cathodeon monoscope, but may also have been generated from a transparency. Does anyone have a better photograph of this or any other vintage captions?

UN-RETOUCHED picture taken directly from the screen of a *Wireless World* superhet television receiver at Bath, some 100 miles from Alexandra Palace.

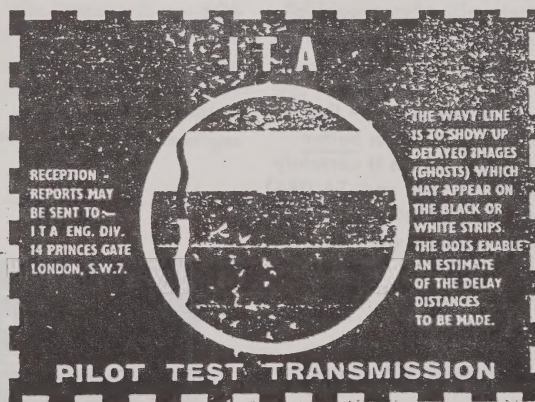
FAREWELL TO 405

The 47 IBA 405-line VHF transmitters will begin to close in 1982 and will be completely phased-out over a period of about four years. The stations to be closed first will be those in areas where there is already good UHF coverage in order to minimise inconvenience to the public.

Pat Hawker, Principal Engineering Information Officer, bids farewell to the great 405.



Early IBA test cards



The die is cast. The Home Secretary has "spoken" (actually a "written reply"). Sometime in 1986 - precisely 50 years after its first appearance in a public high-definition television service - the cryptic number '405' will finally vanish from television. For the vast majority of the public it has gone already,

living on only in the remoter valleys and for an ever diminishing number of aged '405-only' sets or for those who with "dual-standard" sets but with inefficient aerials cannot cope with UHF 625-line signals.

For many '405' has become a half-forgotten anachronism,

an ichabod, recalled perhaps only in terms of a penetrating line whistle (due, it must be said, to penny-pinching LOPT design by receiver manufacturers) or the era when, all-too-readily, picture tubes developed ion burns or needed booster transformers to restore their all-too-

frequent failure of emission, and the absence of "dc restoration" (again no fault of the system) meant the public saw an off-grey rather than a true black-and-white picture'.

But for some of us, '405' was television - at its best capable (with its positive modulation) of really brilliant black-and-white pictures even if, and less happily, this also included sometimes a snow-storm of ignition interference, in the days when cars had no 'suppression' devices and ran many hundreds of miles to the £1.

What about the line structure? The public loved to see it; it proved the tube was in focus, and they steadfastly refused to use a short-lived switch called "spot-wobble" that could have made it disappear.

Don't get me wrong - I'm not saying 405 was better than 625, though it certainly served ITV well and ITA (IBA) fought for its retention for colour: indeed our first Chief Engineer, P.A.T. Bevan, CBE, is on record

as saying: "Practical tests have shown the British public ... would be hard put to it to perceive the difference between 405-, 525- and 625-line colour pictures ...". Even now I'm not sure you could prove him wrong.

And in these days of frequency shortage it's worth remembering that 405 squeezed itself comfortably into 5 MHz channels while for 625 we need 60 per cent more of the precious radio spectrum - a full 8 MHz.

The time when the UK should have dropped 405 was in 1946 when it was offered a 605-line system that might well have become the European standard - but that's another story.

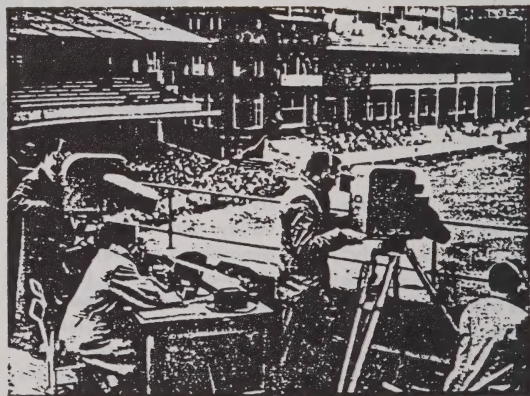
405 was "invented" one Sunday morning in 1934-5 in a private house in Ealing - the home of one of the most brilliant electronics engineers this country has

ever produced: Alan Dower Blumlein, a member of the EMI research team led by Sir Isaac Shoenberg. Alan Blumlein, a perfectionist if ever there was one, came to EMI from Columbia and proceeded, among a stream of patented inventions, to develop in 1929-31 the stereo disc 30 years in advance of its time, before turning his attention to television, then barely in its 30-line spinning disc era.

Blumlein, Cork and Eric White met one Sunday at Blumlein's home to discuss how to breadboard some suitable generator to allow the testing of a television system of higher definition than the 240-line system proposed by John Logie Baird, but at the same time allowing them to use a similar system for immediate comparison.

The basic reference was the 50 Hz mains. This could lock a 243-line system by using five stages of frequency-

Television at Lords during the 1938 Test matches using early Emitron electronic cameras.



tripplers: $3 \times 3 \times 3 \times 3 \times 3 = 243$. Then the simplest way to change to a higher definition would be to make one of the triplers act as a times-five multiplier: $3 \times 3 \times 3 \times 3 \times 5$. And that comes to '405', and was the figure, later confirmed by Shoenberg, that was put into the Marconi-EMI specification, accepted by the BBC after a short November 1936 to February 1937 on-air comparison with the Baird 240-line system (which was badly handicapped by the late development of a Farnsworth image-dissector camera and had to rely on the intermediate-film system with mechanically scanned telecines).

So we had 405 in 1936-39 and again as a sole standard from 1946-64 when BBC-2 began using 625. It is interesting to note that we will have been phasing-out 405 for just as long as it was the prime standard!

ITV of course grew up on 405. The first studio built exclusively for 625 was Yorkshire Television's Leeds centre where, from 1968-69, they used 625-line colour cameras with only the luminance tube inserted and then converted down to 405.

But if you've never seen on the old transmitter control room monitors a genuine 405 line (unconverted) black-and-white picture from a "4½-inch"

image-orthicon camera, then you've never really seen 405 at its best. It was, like everything else Blumlein did, a magnificent achievement for its time'. Sadly Blumlein and Cork did not live to see the post-war growth of television, they were both killed in a wartime air crash in South Wales while flight-testing an airborne radar system. "625" was the product of another brilliant engineer - the German Walter Bruch of "PAL" fame.

In June 1977 they finally got round to putting one of those commemorative blue plaques on the house in Ealing where Blumlein lived - and 405 was "born".

** This article was written some while ago by Pat Hawker, who was then Principal Engineering Information Officer at the IBA. He is now enjoying his retirement and kindly agreed to our reprinting his work.*

Farewell 405 Lines

by
KEITH HAMER

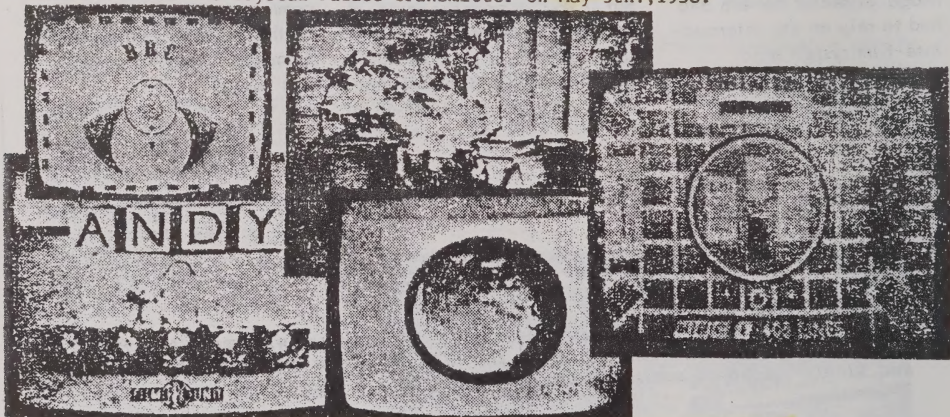


January 2nd, 1985 marked the end of an era in television history spanning almost 50 years. At nine minutes past midnight the BBC 405-line VHF television system officially closed down. The historic event was only briefly mentioned on BBC-1 at closedown. An extremely early example of a 405-line televisor had been dusted down, plugged in and switched on at Television Centre in London specially for the occasion. Fortunately, thanks to the age of the video recorder, the final transmission could be recorded for posterity on 405 Lines via a specially modified elderly receiver.

The channel 1 transmitter at Crystal Palace was officially due to end 405-line transmissions on December 31st, 1984 but the final close-down was delayed in order to plan a national close-down of the system; originally the Sutton Coldfield channel 4 transmitter was due to close on January 6th. In fact a special airing of the world-famous BBC Test Card "C" was planned to mark the occasion but this, unfortunately, did not take place.

The vision frequency of channel 1 (or B1) was 45.0MHz while the sound channel was 3.5MHz below at 41.5MHz. Channel 1 was originally allocated to Alexandra Palace, the birthplace of the world's first regular high-definition television service which began on November 2nd, 1936. Crystal Palace didn't come into service until March 28th, 1956. The transmitter at Sutton Coldfield opened on December 17th, 1949.

As far as we are aware the only BBC transmitter to hold out to the last possible moment was the channel 2 station at Holme Moss which served the North. This transmitter closed down immediately after the regional news opt-out at about 3.55pm on January 3rd. Holme Moss opened on October 12th, 1951. Incidentally, just to prove that nothing's new, experimental television transmissions on UHF in Band V on 405 lines began as early as November 1957. Experimental 625-line transmissions commenced from the Crystal Palace transmitter on May 5th, 1958.



Commercial TV began 405-line transmissions in Band III during 1955. The transmitters closed down at about the same time as the BBC's.

It has been estimated that there are only about 700 single-standard 405-line sets around these days. Until the closedown they were mainly in use in remote areas of Scotland, Wales and the Cheddar Gorge. Some of the transmitters are being given away to hospital radio services and museums.

Thanks to the Department of Trade & Industry the valuable Bands I and III frequencies are being handed over to PMR use and the amateur radio brigade. Television DX-ers in the United Kingdom will find it increasingly difficult to receive DX-TV signals. Only time will tell....

This article first appeared in the February 1985 issue of "TeleRadio News" and is reproduced by permission of the publishers, BS Publications (7, Epping Close, Derby).

MY MEMORIES OF BBC AND ITA TEST TRANSMISSIONS IN THE SIXTIES

by Frank Peplow

Nostalgia, that's the only word for it. The Shadows, Tijuana Brass, Errol Garner to name but a few! For all these great musical names once graced the airwaves of the ITA during their test transmissions in the far-off days of the black and white, 405 line sixties.

All ITA transmitting stations put an LP record on side 1, then side 2; usually only a slight portion of side 2 was heard because an LP normally lasted longer than 25 minutes - and that was all that was allowed for each LP. After 25 minutes - just tone! Then after 5 minutes of tone another LP was selected and played until 25 minutes had elapsed, then tone again. This tone was usually on the hour and half-past the hour.

The sequence was transmitted from 9.30 AM until the opening programmes at 4.45 PM. It was very regimented - the tone was rarely a second late. Even if a record was halfway through, it would have to come off. Then of course - tone! Then another record and so on.

The sequence from test card to station ident to programme was rigorously carried out just as much as the day's test transmissions:

- 4.00 Tone - Test Card
- 4.05 Music - Test Card
- 4.30 Tone - Black-to-white screen
- 4.35 Silence - Grey screen
- 4.40 ITA/Station Ident
- 4.45 Station Ident - Programme.

I suspect the "black to white screen" was what is called a line sawtooth and the grey screen was supposed to be black. Many sets had poor black level clamping. [AE]

In the mid-sixties each local ITA transmitter would have its name printed on the bottom of the Test Card D, e.g. Midlands ITV had the legend "ITA Lichfield Ch 8". As time went by relay stations opened up, and so the Midlands ITA test card was altered; it read "ITA Lichfield Ch 8 - Membury Ch 12". A year later and the ITA opened up the Ridge Hill transmitter. This was now too much to fit in on the test card and so the contractor's name was printed instead: "ITA ATV". I suspect this happened in other ITV regions too.

Instead of records the BBC used tape recordings with their test transmissions, whose Test Card D caption read "BBC 1 405 LINES". The BBC 1 was white letters in three little black blocks. The tapes consisted of three or four pieces of music, then Ding Ding Dong (BBC). Then followed a bit of silence followed by another tape. The music lasted 25 minutes, the same as the ITV, then tone except that the tone stopped on the hour and on the half hour instead of starting then.

To switch from test card to programmes the BBC used to fade out the test card, whereupon there was a black screen and silence for half a minute. Next the globe, which used to go around at a fair old pace in those days, appeared with the BBC 1 caption.

So there you have it for the time being. A large portion of transmitter time was taken up by trade test transmissions on both BBC and ITV. Those were the days!

Thanks for an excellent article, Frank. Let's hope it inspires several more from other readers. And see follow-up on page 34. [AE]

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Keith Wilson, Haddenham, Bucks..
Wireless Museum, Newport, Isle of Wight.

* Thanks for your support - please show this newsletter around, photocopy the subscription form on the cover and spread the word.

USEFUL ARTICLES

This is a list of the articles published in **Television** magazine on 405 topics; it may help you trace one of them a little faster ...

- * October 1983: Recording 405-line Signals (Gareth Foster)
- * October 1984: System A Modulator (David Looser)

- * July 1988: Low-power Band I Transmitters (Charles Miller)
- * November, December 1988: How to run your vintage TVs (Jeffrey Borin).
- * March 1989: A simple Channel 1 Modulator (Jeffrey Borin).

PRESERVED TRANSMITTERS

After 405 line transmissions ceased a number of transmitters were saved: some were re-used in hospitals for diathermy treatment, while others were preserved by museums. Here is a list of some of them - can anyone update or augment this list?

BBC Dover: to Dover Transport Museum.

BBC Rowridge: to National Wireless Museum (Isle of Wight).

BBC Sutton Coldfield: one to Vintage Wireless Museum (West Dulwich), another to Birmingham Museum of Science and Industry.

IBA Sandy Heath: to Radio Society of Great Britain (Potters Bar, Herts.)

TELEVISION TOPICS

>>>> CHEAP COMPONENTS. The business known as Kenzen (1435 Pershore Road, Stirchley, Birmingham, B30 2JL) sells a lot of surplus electronic parts at bargain prices. The current list includes CCTV cameras at £10, many BBC "white units", TV panels and new (old stock) "spot-tip-body" resistors. Why not send a SAE for the price list?

>>>> EXHIBITIONS AND DISPLAYS. The 405 Line Group will have a stand at the BATC's convention held between 10 am and 4 pm on Sunday 30th April. The venue is the Crest Hotel, Coventry close to exit 2 on the M6 motorway. Why not come and see us? Admission is just 50p if you are not a BATC member, and there are lots of bargains to be had. There will also be displays of old television equipment at the BVWS meeting at Harpenden: this is a members only event so you will get details through them.

>>>> LOST PROGRAMMES. Both the BBC and the ITV section of the National Film and Television Archive are extremely anxious to find more programme material of the 1950s and 1960s - not nearly enough has survived. However, the Wider Television Access group has had some success in tracking down programmes believed to have been lost, such as a complete "Tonight" programme of 1958 with Cliff Michelmore. They believe people may have 16mm telerecordings tucked away and are appealing for these folk to come forward. Your material will be cleaned, copied and returned to you with thanks - and no questions asked! Please contact the editor on 0604-844130 if you can give them a lead.

>>>> GOOD HOME WANTED. Mr Beamand (45 Lorne Road, Forest Gate, London E7 0LJ) has for disposal several LOPTs, scan coils and tubes together with an unusual piece of test equipment. There is no charge but hopefully people would be generous. The instrument in question is a Samwell Hutton type 41 wobblator, measuring 10.25" wide, 14" high and 16" deep. It uses a 6" CRT and is fitted with a turret covering Band I frequencies and an IF band. The sweep is provided by a motor-driven variable capacitor. It is built like a battleship and quite heavy. An add-on unit is a Band III adapter, the same width and depth, 4" tall. It sits under the main unit into which it plugs and provides the Band III frequencies.

KEEPING TRACK OF YOUR COLLECTION

Adapted from the ATCS Newsletter, Australia

Maintaining a written record of a collection is one of the activities which distinguish the true collector from the mere hoarder. It not only helps you get to know your collectibles better, it adds to your enjoyment of your collection as a whole.

The practical advantages are many and include:

- 1) You know what you have, where you acquired it and how much you paid for it.
- 2) It is a great help in insurance arrangements, particularly if you have to make a claim.
- 3) If through some misfortune a relative or friend has to arrange disposal of your collection, then well maintained records can be an enormous help with a difficult task.
- 4) If you donate your collection as a whole to a museum, detailed records save the recipient time in research and enhance the value of the gift.

Although museums and individuals use different methods for recording their holdings, depending on size and type, the information itself tends to follow a general pattern. In museums this is usually done in a number of stages but for most collectors a simple, single stage catalogue is more satisfactory.

The following suggestions are for guidance of television collectors who want to keep a simple catalogue.

* Firstly, each item should be given an accession number. You could simply use sequential numbers beginning with 0001 and allocate numbers in order as the collection grows. The system used by most museums is a hyphenated two-part number. The first part is the last two digits of the current year, the second part is the sequential number in that year. For example 85-12 would be the twelfth item registered in the 1985. Because the accession number becomes a unique identification, you may decide to allocate numbers also to the more valuable component parts (e.g. tubes) or any items you acquire separately.

* The accession number should be marked on the item. A small adhesive label on the back or base is usually satisfactory. Tie-on labels may be suitable for other items.

* Each entry in the catalogue begins with the accession number. This is followed by a description of the item, how acquired, source, date and price.

* The amount of detail given in the description will vary with the item. For mass-produced items something like TELEVISION RECEIVER, Bush type TV25, as new condition may be quite adequate. For your rare and precious items, do not stint on details. Include manufacturer, overall dimensions, descriptions of components and their materials and of any distinctive features such as decoration and manufacturer's numbers. Comments on condition, including damage and missing parts, should also be made. A photograph of the item adds greatly to the written description and to the interest of the catalogue.

The entries on how acquired and source are an opportunity to not only state whether purchase, swap or gift but also details such as price or item swapped and name of supplier. This is not only useful information but adds to that personal factor which is such a part of collecting.

There is no limit to the other information you can include. Details of references to the type of item in books and journals, such as BVWS Bulletin, can be added, including photocopies. Particulars of restoration work done on the item should also be recorded and of parts added.

Catalogues can be in the form of card files, bound books or loose-leaf binders. Keeping a catalogue on a computer is also a possibility. Make your choice but remember that you may want to add information to individual entries at a later date.

If you have not already recorded your collection, make a start now and discover the advantages.

STRANGE BUT TRUE

* Folkestone used to have a low-power TV relay station which took its signal from the channel 2 transmitter at Dover. Coincidentally, a somewhat "loud-mouthed" telephone subscriber in the town had an illegal 49MHz high-power cordless telephone and every time he used it, he over-powered the Dover signal on the relay's input and had his colourful conversations broadcast on channel 4!

* Do you remember the "colour TV" experiment in 1956? I do! It was carried out on Saturday, September 8th (according to Practical Television, December 1956) and comprised the letters OXO (apparently intentionally an advertisement, though I don't think this was made clear at the time) with a flicker effect. I for one vividly remember seeing shades of green and mauve, though others apparently saw blue and brown. Do you remember this? Were there further experiments? How was it done? (*see follow-up notes*)

* You may remember the magnifying screens which some people bought to

make their 9" pictures look bigger, but do you also recall the colour screens advertised by mail order in the daily papers on Saturdays? They were derided by **Which?** when tested by the Consumers Association but some viewers seemed to love them! They were a piece of transparent plastic film applied over the TV screen, tinted blue at the top, pink in the middle and green at the bottom. They were intended to give a "natural" look to your viewing!

Got a similar story? Then let others enjoy it too and send it to the editor now!

NOTES AND QUERIES

1. Apart from in the British Isles, was the 405 line system used anywhere else, for broadcasting or any other purpose? (*see subsequent correspondence*)

2. Has anyone definitive information how many 405 line-only viewers were still watching at closedown? The GLC in London, and probably many other local authorities provided Bands I and III on all communal aerial facilities up until the bitter end, but who was actually watching?

3. Towards the end of 405 line transmissions picture and sound quality tended to get very "variable". Would anyone like to say exactly what did happen? (*see subsequent correspondence*)

4. During the 1950s viewers along the South Coast were sometimes troubled by 441 line transmissions from the Eiffel Tower in Paris. I recall a Belling-Lee advertisement describing the fault and a cure - can anyone supply a photocopy or details?

5. Someone with a good set of Practical Television could answer this one! Some time during the 1960s, I think in the Teletopics section, the magazine reported that two schools (in Bristol?) had been given permission to broadcast educational programmes on UHF. This probably pre-dated BBC2. Can anyone turn up the details? (*see follow-up article*).

>>>> Any answers? Any questions? Send your response or enquiry to the editor now (71 Falcutt Way, Northampton, NN2 8PH. Tele: 0604 - 844130)!

HELP!

Please note that we are NOT in a position to supply circuit diagrams, service sheets or other information on equipment. For this we recommend you to read the small advertisements below and those published each month in **Television** magazine. We will also print requests for help in this section of the newsletter. Most valves are not hard to find: we recommend Billington Valves (0403-210729), Kenzen (021-472 3688), Wilson Valves (04575-6114) and PM Components (0474-560521). Would you like to recommend other firms? If you think a firm gives good service please tell us all!

MARKET PLACE

This is the area for buying and selling all kinds of things to do with television, new or old.

Want to join in? Then send us your advertisement: there is no charge, although if space is short we may have to "prune" out the least relevant adverts or hold them over until next time.

Traders are also welcome here but we do require people who are commercial dealers to state this in their advertisements. The letter (T) at the end of an advertisement indicates that the advertisement is "trade".

Also please note that we do not accept any responsibility for dealings resulting from these advertisements, which are published in good faith. Replicas and reproductions may be difficult to identify, so beware of any items "of doubtful origin" and assure yourself of the authenticity of anything you propose buying. And try to have fun, after all it's only a hobby!

* VINTAGE TVs, radios and testgear repaired and restored. Personal attention to every job and moderate prices. Estimates without obligation - deal with an enthusiast (BVWS and BATC member)! Please include SAE with all enquiries - thanks. Dave Higginson, 28 High Street, Misterton, Doncaster, Yorks., DN10 4BU. (T). Tel: 0427 - 890768.

* FOR SALE: several 405-only and dual standard sets cheap for quick disposal, 14" upwards. Dave Higginson (Yorks.), 0427-890768 (T).

* WANTED: any 405 line video tapes (Beta format). Charles Brown 0782-289386.

* WANTED: Murphy V879 or V873 TV+FM radio - 625 convertible; TV manuals; manufacturers' service bulletins, etc. Dave Hazell 0993-771373.

* FOR SALE: 55 minute video presentation made for the BATC "The Development of the TV Test Card". Your editor interviews George Hersee, designer of Test Card F. Lots of old test cards included. 625 lines, VHS only. Recorded on E-180, so you can put other material on the tape. £6 including postage. Money back if not satisfied but I've had no complaints! Allow 14 days for delivery. Andy Emmerson, 71 Falcutt Way, Northampton, NN2 8PH.

* FOR SALE: GEC BT7094 9" TV and radio receiver, Ekco Model 23 TV, Murphy V410 TV, Bush T75C TV. All items cheap, please phone for further details. WANTED: Copy of Newnes books Television Today vol I & II (circa 1935). Philip Marrison, 0283-790747.

* WANTED: Old C-mount lenses for TV camera, also 2" x 2" slides of test cards and captions to borrow and copy or buy. Andy Emmerson, 71 Falcutt Way, Northampton, NN2 8PH.

* WANTED: Link 102 camera. I can supply photostats of service sheets for most 405 line sets, also Television (1928-41), Journal of the Television Society (1938-61), Practical Television (all issues) at cost of photostat plus postage. Bill Journeaux, 7 Blair Avenue, Poole, Dorset, BH14 0DA. 0202-748072.

* WANTED: small self-contained 405 line video camera. Edwin Parsons, 0474-813659.

* EXCHANGE: various 405 line recordings on VHS tape for others. I regret I cannot supply these except as swaps. Andy Emmerson, as above.

* WANTED: any old television magazines and books, wartime or pre-war Radio Times for the archives. Douglas Byrne G3KPO, Hon. Curator, The Wireless Museum, Arreton Manor, Newport, Isle of Wight. Tele. 0983-67665.

* WANTED: any recordings of Test Card C music (1950s until mid-1964). Keith Hamer, 7 Epping Close, Derby, DE3 4HR.

* WANTED: 405 line camera, any type considered. Will either buy or can swap for National WV341 625 line model complete with zoom lens and integral 3" monitor. S. James, 354 Loughborough Road, West Bridgford, Nottingham, NG2 7FD.

* WANTED: old camera tubes sought for the BATC's collection. Also data sheets or technical articles relating to same. Peter Delaney, 6 East View Close, Wargrave, Berks., RG10 8BJ (tel: Wargrave 3121).

* CALLING ALL DXers! Keep up to date with Teleradio News, the only magazine for dedicated enthusiasts. Six issues a year cost you just #6 post paid, so send your name and address with a cheque made out to HS PUBLICATIONS, 7 Epping Close, Derby, DE3 4HR.

..ooOOOoo..

NEWSLETTER CONTRIBUTIONS

For obvious reasons this first issue has been a bit of a ragbag, but that's not the way it should continue. This is your newsletter, so please send in your letters, notes and articles; don't be bashful, other people will be interested in what you're doing! If at all possible, please TYPE your contributions using a black ribbon. I don't have a lot of time to spend retyping and editing: I'd much rather print stuff exactly as it comes in! Contributions on computer disk are particularly welcome and your disk will be returned. I can handle most variations of IBM PC, Amstrad and CP/M disks in 3", 3.5" and 5.25" size but please process your words as a WordStar or ASCII file. I cannot handle BBC or Macintosh disks, and if in doubt please ring first on 0604-844130. Thanks.

And that's it folks: no room for any more! The next issue is being prepared now, so it's time to start writing something TODAY! Don't leave it to someone else ...

405 ALIVE

**The Newsletter of
the 405 Line Group.**

ISSUE 2, June 1989.

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EDITORIAL

Welcome back - here is issue two, new and improved. More articles, loads more advertisements, more pages and a broader range of topics. I hope you like it! By the way, it was never my intention that 405 Alive should be a purely technical bulletin, and I hope we can keep up the proportion of articles on programming and other aspects. Test Cards and the music which accompanied them are a favourite with many of you, and I am delighted to bring you a series of articles on this subject. The author, Paul Sawtell, has made a detailed study of the topic and will answer many of your questions. No research can ever be complete, and he will welcome any comments and queries you may wish to make.

Well, I should have guessed it would happen. No sooner had our existence been announced than I started to receive letters along the lines of "I have this very nice old TV, can you tell me what it is worth and who might buy it?". How does one answer this? I don't consider myself expert on old receivers (cameras and transmitters are more my field) but I do know that few collectors expect to pay much for an old set. Many of us consider 50 pence a fair price for the average 405 line set and often we get them offered free!

That basically is the crunch: just about everyone has a granny or uncle who is desperate to offload an old set and usually they are so glad to make some space they are happy to give it away to a good home. Moreover, the bigger and more immovable the set, the less its attraction to collectors. What everyone wants is nice, compact table models like the TV22! (Did you see its picture in the newspaper advertisement for Philips's new video recorder?) Obviously there are some particularly collectible items, like the TV22 just mentioned, and some collectors are prepared to dig deeper into their pockets for an especially interesting set, but in the main old TVs are not yet expensive, thank goodness! That's what makes this hobby so attractive, even the spare parts are fairly cheap if you know where to go. Anyway, what I offer these people is a free advertisement in 405 Alive: whether they still have the sets by the time the newsletter appears is out of my hands of course.

Do you agree with this? Would you be happier if old receivers started to acquire "collector's prices"? Have you noticed a trend in prices? Write in and tell us all your opinion!

By the way, one or two of these "fan letters" (from non-subscribers) arrive without SAEs. Guess what? They go in the bin! That may sound cruel but it seems strange that people expect information that will be valuable to them, yet they don't consider it worth 14p ...

You will also note this time the first of a series of "fact files". Nothing startling you might think but the idea is to assemble in one handy article various bits of information on a theme which might otherwise take ages to piece together.

Again, suggestions and contributions are most welcome.

Are we nothing but a nostalgia group? I hope not: nostalgia, besides not being what it used to be, is a dangerous thing to get involved in, at least for its own sake. You cannot bring back the past and it is futile to pretend you could. What we can do is to appreciate the best elements and craftsmanship of old equipment and programming while relating it to that of today. You can't walk backwards into the future, but equally you can't have a future without a past. Enough philosophy (and if you disagree why not write in and tell us why!).

Incidentally, we now have 43 subscribers (thank you for your support!). A few people who were very enthusiastic about the first issue have not sent in their cheques and SAEs. This is a pity and I wonder why. Perhaps they didn't like what they saw, or more likely, they just forgot. Odd but never mind. Anyway, I'm sure you will spread the word about 405 Alive. Don't forget, it's your newsletter and it only exists because you decided it would be interesting to you. So try and contribute something, if only a letter or a small ad. Anything to avoid it being a one-man-band! And if there's a topic you'd like to see covered please write in and tell us. Another reader may be able to write us an article on that very same subject. All contributions are welcome!

A quick point. Two people sent their SAEs without stamps, while others sent only 19p stamps on theirs. You don't really want to have to pay postage due and you folk will have polite reminders to do better next time! Please cooperate in this ...

Lastly, people have asked me how long I think 405 Alive can be kept going. The answer is as long as you find it interesting - there is certainly enough material for two years' worth at minimum. At very worst, if things start to fizzle out after that time, we'll wind things up (but not before everyone has had all the issues they paid for). The way things look, though, I don't think this will happen! But I look to you for support ...

Andy Emerson.

LETTERS, WE GET LETTERS ...

From P. Thorpe, Delves, Walsall:

I am the owner of a working Pye FV1 single channel receiver: I bought it for 4 shillings from a friend at school almost twenty years ago. It was many years and a lot of hard work, components, etc. before I got it working. I enjoyed watching it for a few years and then they closed down the 405-line transmissions from the Sutton Coldfield transmitter ... and that ended its use.

However, I have built a simple transistor oscillator which puts a tone through the audio section and also fills the screen with a series of dashes to prove the scan function. Also I do from time to time come across very early TV receivers, but have had to pass them by because of storage problems.

From Keith Rann, Loughton, Essex:

I would like a copy of the 2-hour demonstration film the BBC used to show in the 50s, with Big Ben striking 10 AM and Sylvia Peters announcing clips from programmes, with Test Card C in between. The BBC stopped putting this film out, I think, in summer 1955; well anyway it was stopped before ITV started in September 1955 and when this happened the black letters BBC appeared in and around the letter C on Test Card C. Only the white C appeared until just before ITV started. [Has anyone got this? Answers to the editor please - we might arrange copies if the BBC agrees.]

From Gary Platten, 2 Callerton Place, Craghead, Stanley, County Durham, DH9 6EJ:

I have a small collection of sets; my oldest one is a projection set from about 1949 which I acquired from our local rubbish tip! I usually call in once a week to see if anything interesting turns up. One particular week the attendant summoned me over to his shed and asked if I was interested in old radiograms as well as televisions. I must admit it looked like an old radiogram but it had three controls on the front, focus, brilliance and an on-off/volume knob. It also had a door on the other side of the controls which housed a projection tube and lens.

When I saw this I immediately asked how much he wanted for it, he replied "50p". So seeing a bargain, I bundled it into the car and brought it home. I checked everything was intact and then switched on. To my amazement it came on and produced a picture on the wall - blank of course, but nevertheless it worked. It has "Decca" in gold lettering on the front below the controls, with a plate on the projection door saying "Model 1000, projects 4' x 3' picture". I would appreciate any information on this set from other readers and in particular if there was a screen of some kind to hang on the wall for the picture.

Some people have all the luck! But it shows that it is well worth cultivating the man at your local tip ...

From Keith Wilson, Haddenham, Bucks.:

I have recently been reading a very interesting (but rather badly written) American book on the history of television. This makes the rather unexpected assertion that, in 1936, there was little difference in the sensitivity of the EMI Emitron and the Farnsworth Image Dissector, which was available to Baird. I wonder if anyone knows, therefore, why Baird made so little use of the latter device.

Good question. Was it Baird's obsession with non-electronic scanning systems or was it royalty payments? Can anyone enlighten us? (We subsequently found out that the Image Dissector was too insensitive at this period.)

405 LINE TV IN IRELAND

It is all too easy to forget that the BBC and the ITA were not the only TV broadcasters in the British Isles; 405 line transmissions were also radiated for many years in the republic of Ireland. Radio Telefis Eireann (RTE) started TV broadcasting in 1961 with a Band III transmitter on the Kippure Mountain to the south-west of Dublin. It was announced that from the outset Ireland would adopt the 625 line system used in most of Europe. However, because of the large numbers of sets already in use in the north and east of the country for receiving British BBC and UTV programmes, the initial service was on 405 lines.

Following some early productions on 405 lines, programmes were originated in 625 lines, and image transfer standards converters were installed in Dublin. A solid-state converter was subsequently installed at the Kippure Mountain transmitter. From the outset there were more than 40 hours of programmes per week, more than half of which was home-produced material. The studios were 405/525/625 line-capable and designed to require minimum staffing levels. Standards conversion was afterwards carried out by vidicon cameras and monitors, and latterly one ex-BBC converter.

Transmitter sites

Main transmitters were established at Kippure (Dublin) and Truskmore (Sligo), with low power transposers at Fanad, Letterkenny and Moville, all in Co. Donegal. These transposers converted the received signals to another frequency at RF: technically they were not transmitters since they did not demodulate the video and audio signals. (There were almost certainly some other, illicit low power stations relaying BBC and ITA signals but we have no details of these!).

Closure dates for the foregoing are a bit hazy and RTE have been unable to provide full details. Known last transmissions were:

Kippure	31.1.79
Truskmore	27.8.78
Co. Donegal transposers	end of 1983 (?)

If anyone can fill in more details please let us know.

RTE do not appear to have retained any old equipment from the 405 era, at least as far as their museum collection is concerned, though their historian (Paddy Clarke, 01-696592) believes some may still be in store. A personal visit to RTE's Donnybrook headquarters might reveal more information!

DX reception in Britain

The transmissions on B7 were received regularly on the British mainland, at least as far as the south Midlands. I have spoken to two TV DXers about this and I'd welcome further reports. Ian Beckett (near Buckingham) says he used to receive signals only during thick fogs in November, but his beam was aligned on Lille. James Burton-Stewart, in the same area, using a rotatable antenna used to

receive signals at least "in the noise" on a more or less daily basis.

PROGRAMME MATERIAL WHICH YOU CAN BUY

If you did not have the foresight to record 405 line material when it was "on the air" how do you go about getting hold of vintage program material?

One way is to exchange with other collectors and so long as this is done on a proper basis I guess few people could object (even if it is technically "wrong"). Obviously, if you have nothing to swap this will be difficult. Another method is to standards-convert 625 line programmes which were originally on 405 lines. Several of our members have standards converters which they will use to convert other people's material by arrangement, or you can do it yourself quite successfully by pointing a 405 line camera at a 625 line monitor or TV. Of course, you may just wish to renew your acquaintance with old programmes but on a normal 625 line TV.

Old programmes are broadcast on BBC and ITV from time to time, and Channel Four has made a habit of arranging "vintage evenings" once a year. The broadcasters also revive old series from time to time. (There is a rumour that Channel Four will revive some ITC series such as Robin Hood and Sir Lancelot this autumn, also that BBC-2 will screen a definitive program on old TV commercials.)

Some old programmes are also available for £9.99 as pre-recorded tapes in the shops, for instance some "classic" episodes of Coronation Street and the Ready Steady Go music programmes. Volume 3 of the latter even includes some dubbed-in old commercials and idents although they have not got these quite right. I have now bought Coronation Street, and was rather disappointed that it does not include the old Granada animated ident - it did when it was screened on ITV a few years ago but I did not record it then [Did anyone else?]. Among other cassettes you might consider adding to your collection are from BBC Enterprises, also at £9.99 each. They are Watch with Mother (relive Andy Pandy, Bill and Ben and all the other childhood favourites!), the TV version of Quatermass and the Pit and several of the Hancock's Half Hour comedy programmes. Of course these may not all be to your taste but they are worth mentioning. Are there any others that you would recommend? Why not let us know?

CHANNEL FOUR "VINTAGE EVENINGS" BROADCAST SO FAR

The Cotton Collection (BBC programmes; the rest are ITV)
Fifties to the Fore
Granada in the Sixties
It was Twenty Years Ago Today
ITV Comedy Classics - The Sixties
Salute to ATV
Thirty Years of ITV

DAYS OUT

"AERIAL" SUMMER SWAP MEET

Not much time to catch this one! It's on Sunday June 18th at Clarence House, Portishead, near Bristol and admission is strictly by ticket only. Send a cheque for £1 (made out to G. Hanham), a SAE and your name and address and phone number to Geoff Hanham, P.O. Box 36, 14-16 Queensgate, Inverness, IV1 1AA. I quote from the leaflet: "Bill Joumeaux will be bringing along a 405 line TV modulator, so there should be some excellent vintage TV viewing. If you have a vintage TV you are more than welcome to bring it along and try it out on the day!".

STACEY HILL OPEN WEEKENDS

If you are looking for a day out, you might like to consider a trip to Wolverton. The Stacey Hill Museum is an industrial and rural history museum at Wolverton (not Wolverhampton!), near Milton Keynes (close to the M1 motorway and A5 road). If you go on a Saturday you might care to combine the trip with a visit to Milton Keynes (largest undercover shopping centre in Europe) but then again, you might not!

Anyway, the collection is huge, ranging from old tractors and lawnmowers to railway coaches and steam tram relics; they have restorations of an old-time baker's, a dairy and a printer's shop, as well as stationary engines. Of particular interest to THG members will be a collection of old radios and TVs, also a lot of old telephone equipment. The dates are June 17/18, July 15/16 and September 16/17 and opening hours are 11.00 AM to 5.30 PM. A modest admission charge is made. The museum is in an old farm in Southern Way, Wolverton. If you make for Wolverton station or town centre, you will find the museum about 3/4 mile south-west of here. It is not so easy to find the way from Milton Keynes itself, so I suggest you head for Wolverton and ask then!

TEST CARD TOPICS

Test Cards are a matter of perpetual interest to many readers, and from time to time we will print notes here on this subject.

* Several of you have bought copies of my video on the development of the television test card. During the research for this I interviewed a number of people who have been involved professionally with this subject. The following are some notes of "interesting things" which did not really fit into the video but may yet interest people.

The Girl in the Hat is a colour photograph which was used extensively

during the BBC's colour tests, in advertisements and even recently in user manuals for VCRs. It originated with the American SMPTE organisation, the Society of Motion Picture and Television Engineers. It was one of a series issued by them with the aim of letting engineers look for particular errors in the NTSC colour system. This picture was the most used of them.

Monoscopes

By the time the BBC TV Centre opened at Wood Lane in the 1960s no-one thought of installing any monoscopes. As a source of test signals they were already considered out of date (though some ITV companies still continued to use them, for instance Rediffusion at Wembley). Many small studios at the BBC used caption cards for titles, so that you could use the camera for other things during the rest of the programme. Also, if there was a change you could get a graphic artist to draw a new caption. Otherwise, if you used slides, Photographic wanted three days to produce a photographic caption.

Test Cards

Malcolm Burrell points out that the Experimental Colour Test Card on the tape does not date from 1962 - instead he remembers seeing it used on the experimental transmissions around 1957. It was afterwards superseded by the "Angels Wings" version of the tuning symbol with the colour picture of Sylvia Peters.

The Reduced Power apology slide was normally used at the transmitter sites [Sutton Coldfield, for instance, has a slide scanner but smaller stations used a vidicon camera and a dioscope (illuminated slide projector)]. Obviously this was used only in emergencies. Most other apology captions were centrally generated. Originally these were produced by monoscopes but they were not considered very good. They ran very hot and you were restricted to whatever message was contained on the monoscope tube. For this reason the BBC did not use many monoscope cameras, which were considered obsolete there by the time test cards D and E came in.

Test Card F was an amazingly popular design: versions were produced for the all of the following:

BBC, IBA (Headquarters and each of the regional companies), CTVC [Churches TV Centre], University of Aberdeen, The Open University, Marconi, RCA, Bahrein, Dubai UAE, Jordan TV, NRK [Norway], NZBC [New Zealand], SAS, Channel 10 [Sydney], TVW7 [Perth], Colorful 7, NBN3 [Newcastle], STW9 and TCN9 [Sydney]. A royalty of £5 was paid to the BBC on each copy made since the BBC paid for all the development work.

Derivatives of Test Card F were used by Hong Kong, Malaysia and Singapore.

Test Card C Centering arrows were added to the outer castellations of this pattern, from July 1958.

Test Card D This was radiated by the BBC from 1.12.1965. [*disputed, see FEEDBACK, issue 3*]

Test Card E This was radiated by the BBC from April 1964.

The Modified SMPTE pattern was used for UHF field trials between 5.11.62 and mid-1963.

Tuning Signals

The first version of the "Angel's Wings" pattern, with a black centre, was radiated from 19.8.55. The centre was replaced with something which looked for all the world like a loudspeaker grille as of 16.6.56.



* "The girl in the hat"

TELEVISION TOPICS

STANDARDS CONVERTERS

Several readers possess these magic machines. Philip Marrison has two, one digital and one analogue. The digital one was bought from Crystal Palace, where these beasts were repaired, and is not (yet) in working order. Restoration will probably take a while. Philip's analogue converter is a formidable affair of two full-height bays of 19" racks. It does indeed work but has some minor faults which Philip is gradually clearing. First job is to replace the 1960s-vintage electrolytic capacitors, one of the main causes of trouble with old equipment.

REFERENCE

Most 405 line TV collectors now have the five volume set of Newnes RADIO &

TELEVISION SERVICING published in 1957. But well worth searching for is the two volume set published in 1952 which contains servicing information for over 100 televisions not covered in the later editions.

POOR MAN'S VARIAC

When applying mains power to an old device which has not been switched on for, say, 20 years the initial surge may well strain capacitors (I know, I have "blown up" two cameras in this fashion!). The solution is to run up the voltage in stages, using a variable transformer or variac. Also any device containing a transformer should be "dried out" by standing in a warm room for a week. If a variac is not to hand a substitute method is to run a 60 watt lamp bulb in series with the device for an hour, to give the electrolytics a chance to reform. It might even be worth screwing a 13 amp socket and a batten lampholder to a board for this purpose.

TELEVISION BOOKSHELF

THE FIRST 30 YEARS OF TELEVISION GRAPHICS by Keith Hamer and Garry Smith. (Paperback, 16 pages. Price £1.50 including UK postage, HS Publications, 7 Epping Close, Derby, DE3 4HR.)

Another fascinating book from the testcard team: this one is short but very comprehensive in its 16 pages. Well illustrated and well worth getting hold of if your interest lies in test cards and tuning signals. I hope they do something similar for ITV soon!

FANTASTIC TELEVISION by Gary Gerani and Paul H. Schulman. (Paperback, 192 pages, £7.95. Published by Titan Books and available from Virgin Records, MOMI, and booksellers.)

This book is subtitled "A pictorial history of sci-fi, the unusual and the fantastic from the 50s to the 70s" and covers TV series and made-for-TV movies both British and American. The cover features the aerials of Alexandra Palace (enough to make me buy it!) but do not let this fool you, it is basically an American book with some British material added. No problem though: it covers 190 shows (with thumbnail synopses of each episode) and is illustrated with 350 photos. So if The Avengers, Batman, Star Trek, The Prisoner and The Twilight Zone are your thing, this book is for you! It is a good value-for-money summary but don't expect any very deep insights - there are much more detailed studies of many of these cult shows at specialist bookshops (e.g. MOMI in London).

CULT TV by John Javna (Paperback, 256 pages, £8.95. Published by St Martin's Press, New York. Available from Mega City, 18 Inverness Street, London, NW1 7HJ. Tel: 01-485 9320.)

A similar book to the foregoing and subtitled a viewer's guide to the shows America can't live without. More than 75 shows are covered, in a less superficial way than in Fantastic TV. There seems to be more hard-core trivia for fans, too. For instance why was Emma Peel so called in The Avengers? Answer: an in-joke by the series' producers who wanted to give the programme m. appeal

or man appeal! What was the distance between the Bat Cave and Gotham City? 14 miles ... of course you remembered! Highly recommended.

THE ITV ENCYCLOPEDIA OF ADVENTURE by Dave Rogers. (Paperback, 594 pages, £9.95. Published by Boxtree Ltd for ITV Publications Ltd.)

Over 3,200 entries of British-produced TV series transmitted on ITV since 1955. More than 5,400 episodes of your favourite adventure, thriller, spy and sci-fi programmes. Cast lists, transmission dates, etc. etc., all written by one of TV's most accomplished chroniclers. What more can I say!?:)

BBC TV TEST CARD MUSIC - a personal view in three parts *by Paul Sawtell A.M.B.I.I. M.P.A.*

Part one - the fifties and early sixties.

I can honestly say that BBC Trade Test Transmissions have been the single most powerful influence on my life; it all started for me in 1962 when I was just three years old and used to watch the Schools programmes on BBC tv. When the programmes finished for the morning this funny black & white pattern appeared on the screen. It didn't move, but it sure made some lovely noises! I was immediately hooked on Test Card Music for life!

I should perhaps say at this stage why I am not including ITA test card music in these articles. As they used commercially available records it was quite possible to nip down to the local shop and buy them; not so in the case of the BBC tapes. These were compiled from "library" music publishers. Library music in this context means music recorded outside the country in which it is to be broadcast and NOT available to the general public. Therefore the BBC music was otherwise unobtainable and to me therefore, very special. Almost every style of music imaginable (plus some unimaginable!) has been featured over the years, possibly the only exceptions are opera and contemporary classical - such as the music of Stockhausen. It has all had a great effect on my career to as a professional musician; the musical arrangements on the whole were absolutely first class and being exposed to this at an early age meant that time was not wasted on the more banal aspects of pop music.

The music used in the early fifties actually came from 78 rpm records rather than tape compilations; although I was not around at the time due to an oversight on my parents' part I do have some recordings of these records as well as the "Programme as Broadcast" lists from 1953 - 1957 which gives details of everything used at that time.

Most of the records were BBC library or ORIOLE discs and there was a considerable amount of Cuban influenced stuff, many tracks with vocals! Also featured were many fine classical works such as the Hungarian Dances by Brahms; Symphony no. 1 by Weber; La Clemenza di Tito by Mozart etc etc. In fact, the first actual tapes came into service in September 1955. Some of these

ran for some forty minutes whereas others were only a little over a quarter of a hour. With the introduction of later tapes in January 1957 came the famous BBC signal (the musical notes B, B and C) every one, two, three or four tracks. In those days each tape began with the BBC signal followed by a 5 second pause before the music began.

Again, what made the trade test music so special was the tremendous variety of material used, from Beethoven's German Dances to Van Heusen's Dam That Dream to a little oddity called Scrub, Brothers, Scrub! A chap by the name of Ken Warner was responsible for that one; We even had a piece with dog barks in it in 1964/65! Called La Gavroche, I am at a loss to understand what the connection is between a Parisian Urchin and dogs barking! Maybe someone can help??

1963 was quite an important year as two tapes compiled for the national network were distributed to the BBC regional centres where they enjoyed a long period of usage for regional trade test transmissions up to 1971 when they were finally discontinued. These were really super tapes; one began with the Ray Jack Group playing Bugle Call Rag, also on this tape was Mack the Knife, 12th St. Rag, a jazz piano trio playing Clementine (Leo Chaulliac & Rhythm) and Fools Rush In. The other opened with four rather be-boppy numbers by Bobby Gutesha starting with the slightly dissonant Binokel. This tape featured one of the very few vocals since the tapes were brought into service with a number called Rio Cha Cha Cha. Again we had some lovely classical tapes as well as a good mixture of light and novelty numbers.

Throughout the history of trade test tapes the compiler has always appeared to have a good sense of humour - apart from dogs barking there was a hilarious arrangement of the fifties hit When by the Kalin Twins. Add together a slightly out-of-tune violin, a wonky baritone sax and an outrageous sense of fun and you have a real treat. There were two other tracks on this same tape which sounded a bit like the Temperance Seven (I know it was not actually them) but sadly I do not have any information other than the possibility that the one piece is called Charleston Parisienne and that they are BOTH a scream! It is of course impossible to mention everything in three short articles but I would like to say that I warmly welcome any correspondence from any others interested in the subject; also anyone who has any recordings may like to get in touch with a view to swapping some material.

Write to me at 20 Seymour Road, Stourbridge, DY9 8TB. The next article will cover the period 1964 - 1972 when there were some great changes. Bye for now.

NOTES AND QUERIES

1. Apart from in the British Isles, was the 405 line system used anywhere else, for broadcasting or any other purpose?

When I visited Hong Kong at the end of 1972 I was surprised to find a 405 line TV in the hotel. At that time two 405 line channels were distributed around the colony using a Rediffusion cable system only. There were also two different off-air channels using the 625 line PAL system I on UHF, as in the UK. Dual

standard cable/aerial sets were available. When I next returned in 1978 the Rediffusion system had closed down and all four channels were on 625 off-air in colour. [Gareth Foster]

3. Towards the end of 405 line transmissions picture and sound quality tended to get very "variable". Would anyone like to say exactly what did happen?

There was "variable" reception here (Loughton, Essex) but only on one channel. The BBC-1 Crystal Palace transmissions remained perfect right up to the end, but on ITV Croydon, many times when I switched to channel 9, I got a blank raster but the sound was still there. I remember one occasion there was a picture, but after a minute it just faded out, leaving the sound only. I think I read in Television it was their standards converter failing. [Keith Rann]

The final years of 405 lines certainly saw some very variable standards. I moved house in December 1981 and it was some six months before the house was organised enough for me to get around to switching on a 405 set. When I did I found a strong ghost on ITV (channel 9, Croydon). No amount of adjusting the aerial (left in the loft by the previous occupants) helped, so a visit was made to the roof. The Crystal Palace mast was visible some 14 miles distant but Croydon was hidden behind a building about five miles away. I assumed this was the problem. It wasn't until near the closedown some two and a half years later that I took a set and VCR to my mother's house (where I knew the signals were clean) to make some recordings, that I realised that the ghost was being transmitted and that it must have happened during the six months after I moved. I phoned the IBA who thought it highly unlikely that they would transmit a ghost but checked anyway and were surprised to find that they were doing. As it was only a few days to closedown not much was done about it.

The BBC TX at Crystal Palace was also poor near the end. About six months before closedown there was a hum bar running through the picture. Several phone calls to the BBC had no effect until I got hold of the ex-directory number at the transmitter and phoned one evening. It was fixed the same day. Around a fortnight before the end about every fourth line of the picture was slightly brighter than the others. A phone call to the transmitter again and they switched over to the standby converter, then rapidly back again as there was then a massive hum bar, so we can assume that the original fault was not fixed. To give them their due, it was sorted out in a day or two. [Gareth Foster]

In the last weeks of 405, signals here at Northampton were too weak and noisy to record. So I had to take my equipment up to London to make my recordings there. Even then, the BBC signals were so bad as to be not worth recording! [Andy Emmerson]

6. Has anyone got any 819 line recordings? I had a short one once on VHS but erased it accidentally, and there was never a good enough lift for me to make another one before it closed down. Although I don't have an 819 line receiver I can screw the horizontal hold far enough on my Murphy V849 to lock it. 405 line sets can also display 819 as two tall narrow pictures side by side. I wonder if there are any 819 enthusiasts in France/Belgium and if so, whether they would be interested in joining us as a renamed 405/819 line Group. Just a thought. [Gareth Foster]

And a good one. I asked a leading French TV-DXer but he replied he knew of

no-one who had recorded 819 line programmes. I know a TV-DXer in Sussex who had a French model Philips N1500 VCR which was intended for both 819 and 625 line recording, but I have no idea if he recorded Lille on channel F8a. I used to watch it from time to time on a Sony TV112UM quad-standard portable (625 CCIR, 625 Belgian, 625 French and 819 lines!). I wonder if our French and Belgian friends went to the same trouble to watch 405 line TV. [AE]

7. CCIR Report 308 of 1963 allocated a VHF channel 14 to Britain. Was it ever used? What was its intended purpose? (*Answer on page 43 of issue 12*)

Any answers? Any questions? Send your response or enquiry to the editor now (71 Falcutt Way, Northampton, NN2 8PH. Tele: 0604 - 844130)!

STRANGE BUT TRUE

London to Brighton in Four Minutes, made by the BBC Film Unit in 1952, was a favourite of my childhood. In those days one never knew when it would be screened, but it often popped up when there was an unscheduled gap between programmes. (Those were the days of intermissions and interludes!). Luckily, it has been repeated on BBC-TV several times recently. Apparently the journey on the Brighton Belle was filmed at 2 frames per second (fps).

Thus at the normal projection speed of 24 fps a speed of 60 mph becomes 720 mph. Some people say there were two versions of this film - can anyone confirm and explain? That is ignoring the subsequent remakes of this classic film.

Incidentally, this film set the pace for several others in the same genre. First came London to Brighton at (?) 500 MPH (I cannot quite remember the speed), which was a colour film sold on the 8mm format by Mountain Films. I guess this was made during the 1960s. British Transport Films made Let's Go to Birmingham (Paddington-Birmingham in five minutes) and more recently Inter City 1250 (Kings Cross-Peterborough at 1250 mph!). Also in recent times, the BBC remade London to Brighton but showed only sections of it, interleaved with the original, classic version.

FEEDBACK

From Philip Morrison:

You mentioned the two ex-Sutton Coldfield transmitters now in preservation. These were not part of the original installation, but very low power replacements run on a main and standby basis (turned on by time-switches: I seem to remember, set not to transmit Breakfast Time!). These were fitted to

allow the original Band I hall to be ripped out and re-equipped as the Band II hall.

Another transmitter in preservation - well, part of it at least - is at Bradford in the National Museum of Film, Photography and Television. I think this was ex-A.P. (BBC-ese for Alexandra Palace; C.P. is Crystal Palace).

From John Trenouth, National Museum of Photography, Film & Television (Bradford):

Yorkshire TV's cameras were 625 lines from the start. When the station opened the cameras were Marconi Mk 7 (four tube) colour ones, used in monochrome. All tubes were fitted in fact, but a mirror put all the light down the luminance channel. Soon afterwards they started producing programmes in colour, though only a monochrome signal left the studios. Initially the 625 line signal was converted to 405 lines using an on-site converter. With the coming of the public 625 line service the standards converter was moved to Emley Moor. (This converter is now in the Bradford museum, though making it work will be a labour of love. Any volunteers?). PS: within the next 2 to 3 years we hope to mount a number of temporary (3 months) exhibitions relating to television.

From Stephen Ostler (Radiocraft), Sedgberrow, near Evesham:

I was interested to read Keith Hamer's article "Farewell 405 Lines" in the first issue of **405 Alive** and perhaps could add a little detail to the story of the closedown.

The vintage set shown during the final seconds of the Crystal Palace transmission was in fact a 1938 Baird T18. It didn't belong to the BBC, but to Canadian enthusiast Terry Harvey - who was also working at Lime Grove at the time. Those with video recordings of the event will have noticed that the state of its tube's cathode (visible from the switch-off spot) left something to be desired! The CRT's heater also had a nasty habit of going open circuit unless the neck was regularly tapped! Nevertheless the set gave high fidelity pictures although a little dim. It wasn't particularly sensitive, in fact it is the only set I have come across that would happily accept the full 50mV from a modulator without overloading! These days the set has retired to the U.S.A., where it is part of a large collection.

However this set was nearly never seen at all. Crystal Palace had in fact been shut down earlier in the evening to round off a "closedown party" being held on the premises. Previously though I had obtained a written memo from the senior transmitter manager there that shut-down would definitely take place at the end of programmes. Following a frantic phone call - waving the "little piece of paper" - the station was opened up again, only to close down again a few hours later!

Now I am safely out of the BBC, maybe I can add a postscript to the account of 405 lines on UHF. For back in 1969, whilst working at Network Control, I punched up 405 line Test Card D on the vision mixer for BBC2. I had previously - through the simple expedient of pushing-in both band selector buttons - adjusted the Sony off-air monitor to receive UHF with its timebase running at 405. The 405 line test card came over clear as a bell from Crystal Palace ch.33! The entire 625 transmission chain was equally happy on 405!

May I finish by mentioning that, if an appointment is made, members of

405 Alive are welcome to use the ex-BBC Digital Standards Converter installed here - and to view my two working pre-war sets (among others) should they so desire. Please also accept my best wishes for the future of the Group!

I have one of those Sony TV9-90 sets too: it is an excellent compact dual-standard receiver. Anyone wishing to take up Stephen's kind offer should call him on 0386-881988. His business, Radiocraft (located near Evesham), restores old radio, audio and video equipment to a very high standard. [AE]

From Electronic Maintenance, London Weekend Television:

The OXO colour simulation apparatus was devised by someone called Eric Ainley, at the old ATV studios in Foley Street (London). He is now retired, possibly to the USA, and we have been unable to track him down. The image was produced on an EMI flying spot scanner and used alternate fields to make it flicker. This scanner was also used for commercials. (see follow-up).

From Keith Rann:

Frank Peplow's article in the last newsletter (p. 8) is slightly incorrect. On Test Card D, the BBC1 was black letters in four little white blocks. Line 4 of the last paragraph should read "Then followed a bit of silence followed by another piece of music, not another tape. The next sentence is incorrect, except that what he says about the tone only applied in the mornings. In the afternoon the whole tape of 30 minutes length was played, and when it had finished there was a long silence while it was being rewound and then another one was put on. In London, the transmitter used to opt out at about 3.45 PM to show colour films for experimental purposes, rejoining the other stations with Test Card about 4.30 PM.

From Steve James:

Frank Peplow's article was of particular interest: at the end he mentions the BBC1 globe of old. Does anyone know when the famous rotating globe was first used by the BBC, and how many versions appeared through the sixties. I know it had changed to more or less its last form by 1969 to accommodate colour (I think it was coloured completely blue). Does anyone know if the original globe(s) still exist in any museum or so forth anywhere or if they were consigned to the great BBC bin?

MEMORY LANE - do you remember this?!?



ITV Companies

ABC Television

North and Midlands weekends

First transmission: 17 February 1956

Last transmission: 27 July 1968

Combined with Rediffusion to form Thames.

Anglia Television

East of England

First transmission: 27 October 1959

ATV Network

Midlands

Until July 1968 Midlands weekdays, London weekends

First transmission: 22 September 1955

Name changed from Associated Broadcasting Company to Associated TeleVision in October 1955. Current name dates from July 1967 and is to be changed from January 1982.

Border Television

The Borders and the Isle of Man

First transmission: 1 September 1961

Channel Television

The Channel Islands

First transmission: 1 September 1962

Grampian Television

North-East Scotland

First transmission: 30 September 1961

Granada Television

Lancashire

Until July 1968 the North (Lancashire and Yorkshire) weekdays

First transmission: 3 May 1956

Harlech Television

Wales and West of England

First transmission: 4 March 1968

London Weekend Television

London weekends

First transmission: 2 August 1968

Rediffusion Television

London weekdays

First transmission: 22 September 1955

Last transmission: 29 July 1968

Name changed from Associated-Rediffusion in July 1964.

Combined with ABC to form Thames.

Scottish Television

Central Scotland

First transmission: 31 August 1957

Southern Television

South of England

First transmission: 30 August 1958

Last transmission: December 1981

Thames Television

London weekdays

First transmission: 30 July 1968

Formed from ABC and Rediffusion.

TWW

Wales and West of England

First transmission: 14 January 1958

Last transmission: 3 March 1968

Wales (West and North) Television became a subsidiary in 1964.

Tyne Tees Television

North-East England

First transmission: 15 January 1959

Ulster Television

Northern Ireland

First transmission: 31 October 1959

Westward Television

South-West England

First transmission: 29 April 1961

Last transmission: December 1981

Yorkshire Television

Yorkshire

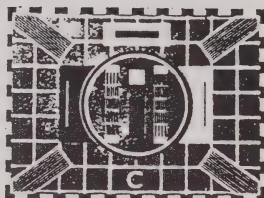
First transmission: 29 July 1968

Next page: a selection of monoscope tubes made by Cathodeon Ltd.

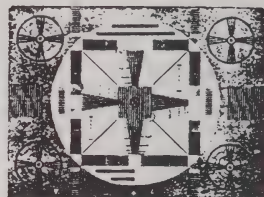
CATHODEON



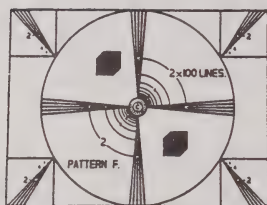
~~PATTERN~~
OBSOLETE



'C' PATTERN



~~D PATTERN~~
REPLACED BY CURRENT
R.E.T.M.A. PATTERN.



~~F PATTERN~~
OBSOLETE

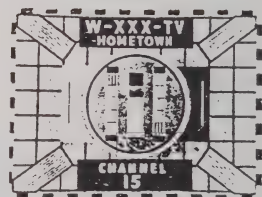
STANDARD PATTERNS



'G' PATTERN



*Normal Service
will be resumed as
soon as possible*

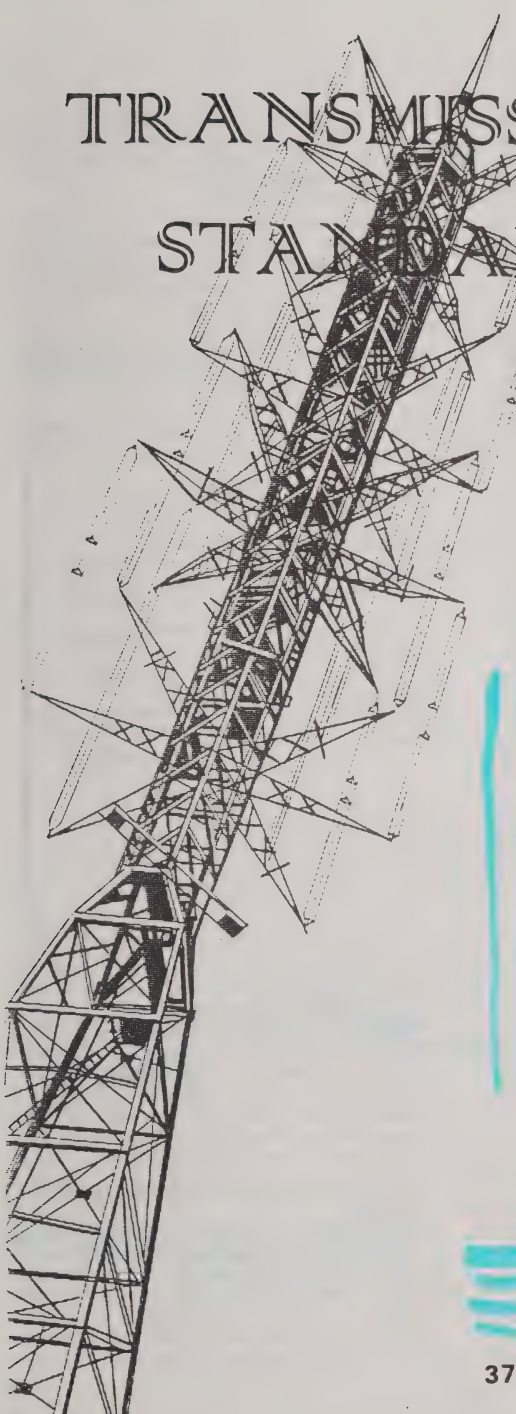


The above examples of special patterns produced to the users' requirements indicate some of the possibilities of this service.

CATHODEON LTD

MEADOWCROFT LABORATORIES · CHURCH ST. · CAMBRIDGE · ENGLAND

TRANSMISSION STANDARDS



The choice of picture repetition frequency is governed by four considerations.

Firstly, it must be sufficiently great to convey movement satisfactorily; this demands the transmission of 20 to 30 pictures per second.

Secondly, there must be no appreciable flicker on the receiver screen, when adequately illuminated. This consideration demands a repetition frequency of about 50 per second.

Thirdly, the picture repetition frequency must be kept as low as possible in order to economise in transmission bandwidth.

Fourthly, the repetition frequency should bear some simple relation to the mains supply frequency, in order that it may be locked to that frequency and thus minimise the effect of residual hum in receivers operated from the supply mains.

Principle of Interlaced Scanning

The first of the above considerations sets a minimum for the picture repetition frequency, and in the Marconi-E.M.I. system as standardised in Great Britain it is set at 25 per second. The conflict between the requirements of the second and third considerations is resolved by the adoption of the principle of interlaced scanning, whereby the scanning of each complete picture is accomplished by means of two interlaced

traversals. By this means the frequency of presentation on the receiver screen, or "frame frequency" of the system, is 50 per second and the flicker effect is completely eliminated.

London Television Station Standards

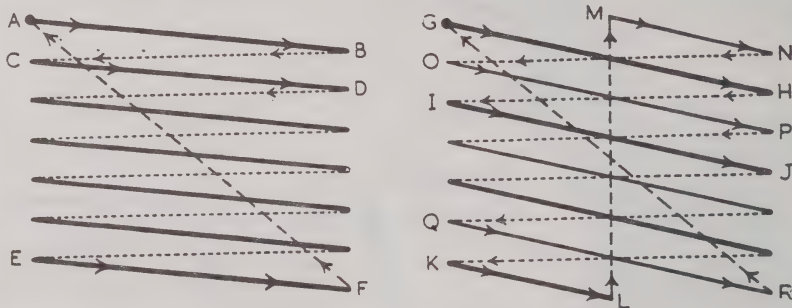
The significant figures, 25 pictures and 50 frames per second, were chosen with regard to the fourth consideration, since the frequency of the supply mains in this country is 50 cycles per second. The Marconi-E.M.I. system is, however, perfectly flexible in this

Experience has shown the transmitted picture to be of very good entertainment value, and the 1943 Commission recommends the resumption and extension of the service without modification.

Nevertheless, the system is capable of higher definition, and the Company is prepared to supply equipment adapted for the transmission of pictures with a line definition of the order of 600.

The vision signals to be transmitted represent from instant to instant the point to point brightness of the image of the scene

THE PRINCIPLE OF INTERLACED SCANNING



The essential difference between the method of sequential scanning and the Marconi-E.M.I. system of interlaced scanning is illustrated in these simplified comparative diagrams of just a few lines. In sequential scanning (left) the spot traces the picture line by line from A to F and then flies back to A to commence another complete frame. By causing the spot to interlace as shown, starting from G, in the right hand diagram, two complete traversals are made to each frame. This enables flicker to be completely eliminated with maximum economy in transmission bandwidth, as explained in the text.

respect, and in the event of a service being required in a territory where the mains supply frequency is other than 50 cycles per second, these standards would be suitably modified. For example, if the supply is at 60 cycles per second the corresponding figures chosen would be 30 pictures and 60 frames per second.

The Marconi-E.M.I. system employs unidirectional constant-velocity scanning, the lines being traced horizontally. The vertical definition available is proportional to the number of lines per complete picture, and equal horizontal definition is ensured by careful circuit design.

The 1935 Television Committee recommended a 405-line system for the London Television Station, and this standard has proved eminently satisfactory in practice.

being transmitted, as this image is scanned in the Emitron camera or film scanning unit. The instantaneous signal may have any amplitude between a value representing black and a value representing the brightest part of the picture, or "peak white." The signals are liable to change with extreme rapidity, and essentially contain all frequencies down to zero; they lie on one side of the datum level, which is black.

Constant Amplitude Synchronising Signals

Synchronising signals are transmitted in the intervals between the vision signals of successive lines and frames. They take the form of rectangular pulses suitable for the accurate timing of the scanning circuits of receivers, and are comparable in sharpness with the vision signals. They lie on the side

of the datum opposite to the vision signals, and do not appear upon the receiver screen.

It is an essential feature of the Marconi-E.M.I. system that the black level is rigidly maintained at a definite fraction of peak carrier amplitude, irrespective of the proportion of black to white in the televised scene. Constant amplitude synchronising signals are transmitted on one side of this datum, and vision signals of amplitude corresponding to instantaneous brightness on the other, the amplitude of "peak white" signals being constant. No wander is possible, and the transmitter is operated at maximum efficiency. Furthermore, the fixing of the black level ensures absolute reliability of signal separation at the receiver.

"Peak White" and Synchronising Ratio

The ratio of the amplitude of "peak white" signal to the amplitude of synchronising signal is fixed at 7 to 3, and the carrier may be modulated in the positive or negative direction. In the case of positive modulation, the black level is fixed at 30 per cent peak carrier and the vision signals extend upwards, reaching 100 per cent carrier at "peak white," whilst the synchronising signals extend downwards to zero carrier. In the

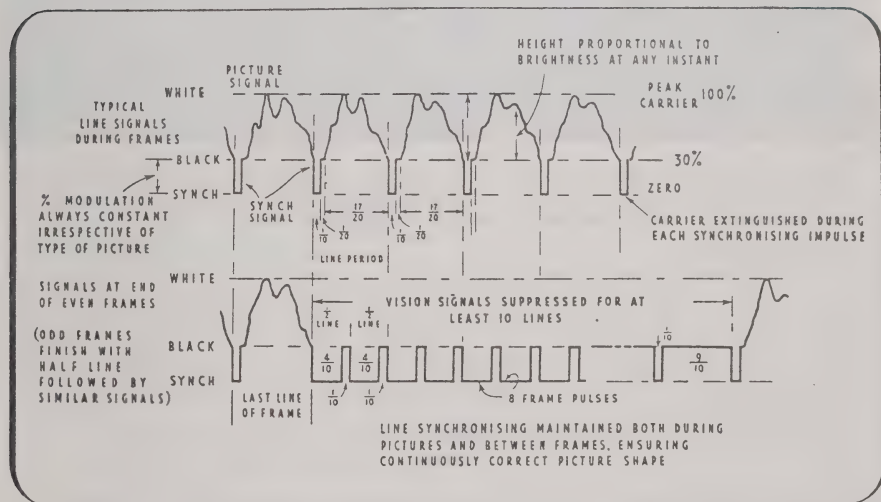
case of negative modulation, the black level is fixed at 75 per cent peak carrier and the synchronising signals extend upwards to 100 per cent carrier, whilst the vision signals extend downwards, reaching substantially zero carrier at "peak white."

System of Modulation employed

The system of positive modulation has the advantage that the amplitude of the synchronising signal cannot be increased by spark interference, and the scanning of receivers of the simplest design is therefore not disturbed. On the other hand, the interference appears on the screen in the form of white flashes. In the case of negative modulation, the interference cannot produce flashes of excessive brightness, but it is liable to cause breaking-up of the picture due to the production of synchronising pulses of excessive amplitude unless limiting circuits are incorporated in the receiver, the complexity of which is therefore increased.

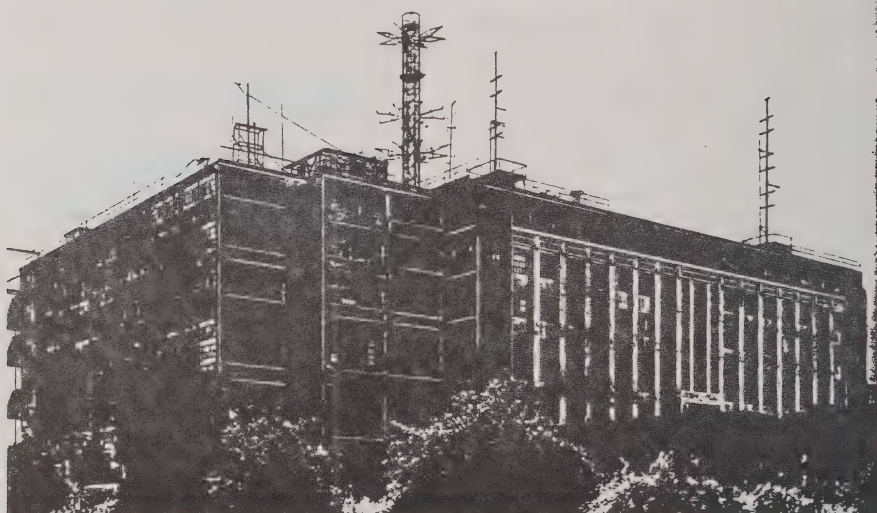
The system of positive modulation was chosen for the London Television Station in the interests of simplicity and cheapness in receiver design, but in cases where this is not a prime consideration, negative modulation may be preferred in view of the reduction in the effect of interference which it offers to the viewer.

A TYPICAL TELEVISION TRANSMITTED WAVEFORM



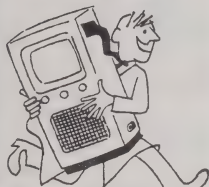
* This fascinating picture shows the research block and aerial tower at EMI's Hayes plant: both survived the war. The laboratories were demolished a few years ago but the top section of the tower (complete with aircraft warning light) is preserved in the research block's car park at Hayes.

THE E.M.I. RESEARCH LABORATORIES AT HAYES, MIDDLESEX, ENGLAND



The E.M.I. Research Laboratories at Hayes, Middlesex, England, from which the first high-definition, high-power television transmissions were made. The television aerial seen in the centre of the picture was the forerunner of the mast and aerial array now installed on the roof of the London Television Station and was used for many of the experiments which preceded the inauguration of a public television service.

JUNE



Still three months

JULY



Getting closer!

AUG

Nearly zero
hour!!

SEPT



Panic!!

INDEPENDENT TV BEGINS IN SEPTEMBER

SAVE YOURSELF A RUSH

Urge your TV customers to convert now!

NO-ONE WANTS to turn down business, but you may find yourself in that situation when independent TV begins—unless you urge your customers to convert *now*!

We are doing our bit with a big advertising campaign due to break in a couple of weeks. Big spaces in London evening and suburban newspapers, posters in the Underground, leaflets for your counter, and windowbills—all these will tell your customers about the forthcoming programmes: most of the biggest names in

the entertainment world will be appearing regularly on the new station. We are telling viewers, too, to come to *you* with their enquiries.

But *you* know what people are like for putting things off! So warn your customers that they may miss the first months of the new programmes *unless they take steps now*!

The new station will bring you plenty of new business—make sure *now* that you can cope with it!

Can you accept orders for conversion work now?

There will shortly be a heavy demand on your skilled labour for conversion work. May we suggest you look into whether you are ready for it—with the necessary labour know-how and equipment supplies?

ASSOCIATED BROADCASTING COMPANY LTD • ASSOCIATED-REDIFFUSION LTD
THE LONDON PROGRAMME COMPANIES

Previous page:

An important message to the trade, issued in June 1955. Note that the original name of ATV was Associated Broadcasting Company, and their symbol was the overlapping eyes containing the letters ABC. This organisation had no connection with the later ABC Television.

On the following pages:

1. TV programmes in 1939;
2. A view of the Alexandra Palace tower before the aerials had been erected.
3. The motif of the Alexandra Palace aerials became an icon of the television era: a stylised version opened the BBC television news, newsreel and films for several years.

Wireless World

AUGUST 10th, 1939.

Television Programmes

Sound 41.5 Mc/s Vision 45 Mc/s

An hour's special film transmission intended for demonstration purposes will be given from 11 a.m. to 12 noon each week-day. The National or Regional programme will be relayed on 41.5 Mc/s from approximately 7.45 to 9 p.m. daily.

THURSDAY, AUGUST 10th.

3-4.20, "Fox in the Morning," a new comedy by Lionel Brown.

9, Adelaide Hall in Cabaret. 9.30, Catch-as-Catch-Can Wrestling. 9.45, Gaumont-British News. 9.55, Cartoon Film. 10, Kuda Bux, the man with the X-ray eyes. 10.10-10.25, Boxing demonstration.

FRIDAY, AUGUST 11th.

3, Puppet Parade. 3.15, Cartoon Film. 3.20, Harcourt Williams telling children's stories. 3.30, Film. 3.40, Animal Drawings. 3.50, Gaumont-British News.

9, Eve Lister and Gene Sheldon in Cabaret. 9.30, British Movietonews. 9.40, E. H. Tattersall. 9.45, Cartoon Film. 9.50, "Love—In Twenty Lessons," a farce by Delano Ames. 10.20-10.30, Pas Seul.

SATURDAY, AUGUST 12th.

3, Cartoon Film. 3.5, "Television Surveys," No. 11—O.B. from Kensington Gardens. 3.50, British Movietonews.

9, Gaumont-British News. 9.10-10.25, Diana Churchill and Denis Webb in Noel Coward's three-act comedy, "Private Lives."

SUNDAY, AUGUST 13th.

9.5-10.20, "Tobias and the Angel," by James Bridie. Robert Atkins' production from the Open-Air Theatre, Regent's Park.

MONDAY, AUGUST 14th.

3, Cabaret including Tommy Handley and Company in "The Disorderly Room," 3.30, British Movietonews. 3.40-4.5, "Mr. Jones Dines Out," one-act comedy by Stuart Ready.

9, Cabaret including Flotsam and Jetsam and Carl and Faith Stimpson's Humanettes. 9.25,

Gaumont-British News. 9.35-10.30, O.B. from the Hammersmith Palais de Danse, which will include the semi-final of the contest to find "Miss Radiolympia."

TUESDAY, AUGUST 15th.

3, A. P. Herbert's one-act opera "Plain Jane." 3.25, Gaumont-British News. 3.35-4.5, "Love—In Twenty Lessons" (as on Friday at 9.50 p.m.)

9, Cabaret. 9.30, Vanity Fair—the trend of Autumn fashions. 9.45, British Movietonews. 9.55, Cartoon Film. 10-10.25, Bee Double Sharp—a musical Bee.

WEDNESDAY, AUGUST 16th.

3-4.15, "Private Lives" (as on Saturday at 9.10 p.m.)

9, Diana Ward in Songs. 9.10, Gaumont-British News. 9.20, Music Makers: Jean Norris (pianoforte). 9.30, "Three in a Bar," a one-act play by Peter Franklin. 9.50, Cartoon Film. 10, Film—"West of Inverness." 10.10-10.25, Le Quintette du Hot Club de France.

Three New
Hi-Q
Receivers...
for 5—175 metres

Short Wave

Two New
Hi-Q
Transmitters
for 20 and 40 metre
bands

The first journal in Great Britain devoted entirely to the interests of the short wave listener.

Editorial and Publishing Offices:
"Short Wave," 63, Lincoln's Inn
Fields, W.C.2.

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How to Erect 5-metre Aerials	page 34
All the short wave stations of the world	page 35

TELEVISION Begins from Alexandra Palace.

Possible Date—Oct. 23rd.

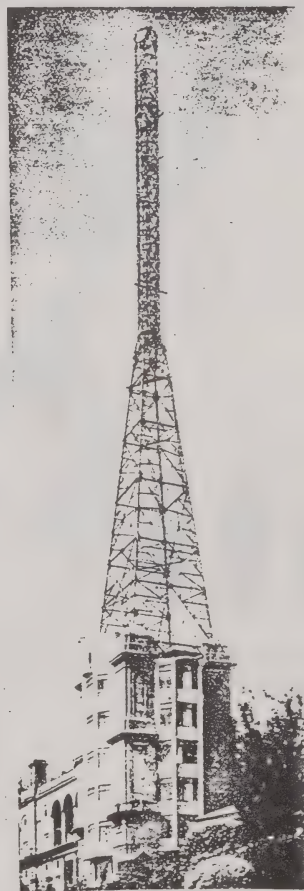
You can hear the Programmes on the new Lissen Hi-Q receivers, and on your present set with the Hi-Q Converter.

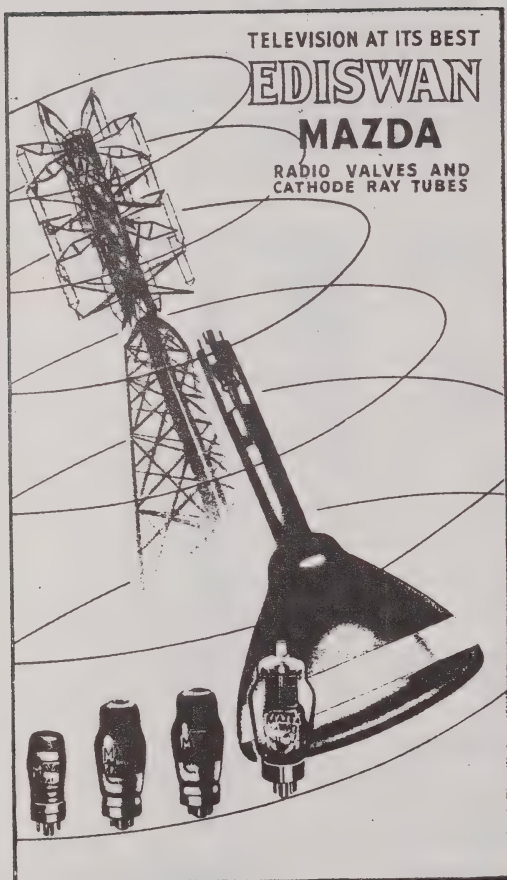
Daily transmissions are taking place during the Radio Show at Olympia so that the public can see actual transmissions of television reception and it is expected that television transmissions will begin in earnest in the Autumn.

Short Wave have it from good authority that the date on which these broadcasts are starting is

October 23rd. Three programme periods are contemplated daily at 3—4 p.m., 6.15—7.15 p.m. and 9.30—10.30 p.m. and the sound signals will be radiated on a frequency of 7.2 metres (41.5 Mc/s) on a power of 3 kilowatts.

Vision signals will be radiated on a frequency of 6.6 metres (45 Mc/s) on a power of 17 kilowatts peak during periods of maximum modulation.





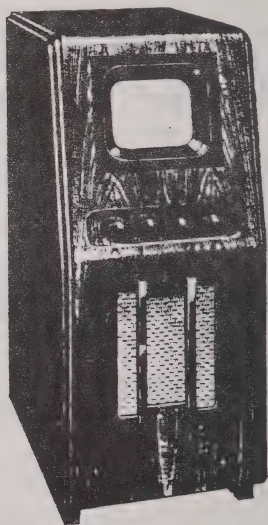
THE EDISON SWAN ELECTRIC CO., LTD., 155 Charing Cross Road, London, W.C.2

R.M.55

Cossor Television Sets

THREE principal types constitute the present range of Cossor television receivers. Model 1210 at 53 guineas is a combined television and all-wave radio receiver, giving an unusually large direct vision picture (12in. x 10in.). The lowest-priced instrument is the 23-guinea table Model 54, with a picture size of approximately 5in. x 4in.

Between these two models comes the new Model 65, with a picture size of 6in. x 5in.



Cossor Model 65 Television Receiver.

Designed for sound and vision only, it is housed in a console cabinet approximately 35in. x 15in. x 20in. There are four controls, two for vision and two for sound. There are 13 valves in the circuit, and the price is 27 guineas.

All three receivers are available with an extra three-valve amplifier for ranges over 20 miles from Alexandra Palace, at an additional charge of 3 guineas. (1939)

Ferranti provided their dealers with this imaginative clock, recalling the BBC tuning signal. You can see one of these clocks at the Vintage Wireless Company's shop in Bristol but it's not for sale!

March 14, 1953

WIRELESS AND ELECTRICAL TRADER

11

THE SIGN THAT MEANS ALL THIS...



... Partnership with a sound and secure organisation.

Really attractive radio and TV models at competitive prices.

Independent H.P. facilities.

Backing of vigorous National Press advertising.

The Ferranti Dealer has a good sign — a sign which tells the time (electrically of course) and which reminds the passer-by of Television, and Ferranti Television in particular. But there is a great deal more to it than that.

Ferranti Dealership means partnership with a sound and secure organisation—one of the biggest and oldest concerns in the electrical industry.

It means really attractive radio and TV models and prices and a first rate technical service.

It means the assurance of a stable price policy, independent H.P. facilities, and the backing of vigorous National press advertising, tip-top literature and sales aids. All that makes our slogan make good sense.



Clearly FERRANTI for sight & sound

FERRANTI LIMITED, RADIO SALES OFFICE, MOSTON, MANCHESTER 10.

405 ALIVE

The Newsletter of the 405 Line Group.

ISSUE 3, September 1989.

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EDITORIAL

I am rather pleased that issue two seems to have struck the right note, at least several people rang and said they enjoyed it. Better still, they felt sufficiently motivated to contribute articles for this issue. Great! This is exactly what I was hoping for, lots of feedback from you, the readers. Please keep this up: everyone else is waiting to see what you can add. So far I have printed everything that has been sent in, resulting in a nice "fat" read, and I shall try and keep the page count at 40 pages minimum.

Incidentally, that means 22p prepaid envelopes are not quite sufficient and you may get clobbered for postage due. Sorry about that but I hope you think the contents are worth the extra few pennies, that is if the Post Office are super-efficient and bother to collect the excess. (Several people have told me they're not!) All new subscription forms ask for 26p stamps on your SAEs, by the way. Getting back to the point, if you feel like sending in an article or a letter, please do! If you are one of those people who are worried about spelling, grammar, etc. - don't worry, this gets tidied up. So do please chip in with your penn'orth! I look to you for support ...

Readership is on the up and up - currently we have 77 subscribers (thank you all for your support!). I confidently expect 100 by the end of the year. Incidentally, one or two folk have asked if 405 Alive is exclusively concerned with 405 line matters, and the answer is no, not quite. I think we are all interested in early television in general so we can allow some early 625 line material, also vintage standards used in other countries.

A serious matter now. The asking prices at this summer's Harpenden swapmeet confirmed that there are now two separate price "schedules" for our TV treasures - a sane price level at which genuine enthusiasts sell among themselves and another for well-off collectors. The organising society has a policy of excluding non-members from these events - which I understand and support - because "People whose interest is purely commercial and contribute nothing to the Society are not encouraged and nor are speculative buyers, for these tend to push up prices beyond the reach of ordinary members". The only problem is, how do they stop their own trading members from migrating to this category? I suppose with great difficulty. Luckily, that's not a problem for 405 Alive, as a glance at our small ads will confirm.

How long we can keep it this way is another matter. Up to now, collecting old TVs has been a refreshingly cheap hobby, with the "raw material" being either given away or sold for a mere fiver or tenner. However, 1950s and 1960s revivals have made things like old bakelite telephones and TVs fashionable again and the Bush TV22 has now become an icon - and expensive to acquire at that. Instead of giving away or dumping old tellys, people now think they are all valuable. "Yuppies" are buying them up and gutting them to put new innards inside. Luckily this is only on a small scale, but it is a disturbing trend.

Some people of course will welcome it. It is gratifying that old sets - and vintage TV in general - are at last becoming fashionable. It shows that we weren't mad all those years ago, just shrewd, and our "investments" have justified the room they took up. Collectors with - dare I say it? - more money than sense are buying up these sets, giving us long-term collectors the opportunity to make a quick buck. But it also means the era of cheap sets is coming to an end, not immediately but gradually and inevitably. Now is definitely the time to snap up those junk shop sets, that box of valves you were offered for the taking, the pile of old Practical Televisions someone mentioned!

All this does not mean we should boycott dealers. Dealers perform many useful functions, such as getting new people into the hobby, making the hobby "accessible", selling us things when we can't find them elsewhere and keeping a high profile for our hobby. They may also take advertisements in 405 Alive!

The funny thing is I have seen all this before - perhaps you have too. Twenty five years ago I collected old telephones and railway relics. Everyone thought you were stark-staring mad in those days but bakelite phones never cost more than 15s. and candlestick phones were advertised in "Exchange and Mart" for £3 10s. ("suitable for conversion into intercoms or table lamps"). Now those old phones have all but vanished from the market and when you can find them, the bakelite phones sell for £50 to £85 and the candlesticks for £150-plus. The price of railway lamps, signs and other relics has also gone through the roof.

With vintage tellies we are still in at the beginning - just. There are still plenty of 405 line sets and magnifying lenses around, but they won't last long. I visited London's Camden Lock and Chalk Farm Stables antique (or really, junk!) markets during July to see if there were any old sets for sale - and there were! Never have I seen so many TV22s together in one place and I guarantee they won't last long. So if you haven't got one yet and want one, get it now. Don't grumble about the price: if you can afford it, don't hesitate. Don't hang around in the hope that the fad will blow over and prices will drop - they won't! I have studied the trends in antique prices for the last 25 years and I think I know the way prices go.

Incidentally, if you're wondering what the "going price" for a TV22 in London is, it's £160 for a clean, smart one and £80 for an unattractive one with cracked case! (Thanks to Pat Hildred for checking this out - I paid my visit on a Saturday, when the stalls were shut. Most of the stalls open only on Sunday.) I did see a very early post-war Pye table-top set, unrestored, and the asking price was £45. A nice set but I suppose the yuppies don't recognise it as being "collectible". By the way, Bush also made a radio in the same style as the TV22: it's called the DAC90 and is just as desirable as the TV. It sells for about £50 at the moment and is hot property. Perhaps you should be thinking about acquiring one - or perhaps you are not influenced by popular trends and just collect the odd set or two that comes your way. If so, you're a wise person! This is a controversial subject and you too may have strong views. You may even disagree violently. I'd be delighted to publish your opinion, so drop me a line. Try and be concise so we can publish as many letters as possible.

Andy Emmerson.

LETTERS, WE GET LETTERS ...

From Ken Bailey, Birmingham:

I found the first issue of 405 Alive very interesting. It certainly brought back a few memories and if I can find a few hours to spare I hope to let fellow readers share some of my experiences of 405 line TVs and write an article for the newsletter. In the meantime, how about a bit of controversy?

In "Strange but True" the flicker effect colour experiment of 1956 was mentioned. No, I don't remember that one as I was less than 1 year old then but I do remember Tomorrow's World programme doing a similar experiment more recently. I think it must have been some time in the 70s.

It's my belief that all those who think they saw colours were experiencing some kind of self-deception or mass hysteria. Viewers were told in advance what to expect and "saw" what they expected to see. No-one has carried out and proper scientific tests where the subjects (viewers) are not given details of the possible results. Can anyone prove otherwise?

Good point Ken, although in this case the persistence of vision on the retina is well known. I have seen an experiment where a cardboard disc, half white and half black, is spun at different speeds. At one of these I could have sworn it was red and at another it really did look green: but once it stopped I was able to prove for myself it really was only black and white! [AE]

From Steve James, Nottingham:

If issue 1 was promising, issue 2 fulfilled that promise. I especially enjoyed the period advertising. It was also very encouraging to see the

size of the adverts section in the last issue. I myself have paid Peter Stanley of Derby a few visits and relieved him of about half a dozen sets, which hasn't made much of a dent in his accumulated "collection". He's an extremely helpful chap with a real enthusiasm, and has got loads of spare parts and valves etc, in stock.

Worth mentioning is the BBC double album cassette "On the Air" (BBC ref 454) containing a wealth of old themes, both TV and radio. Dixon of Dock Green, Z Cars, TW3 etc. are all there in their original and sometimes hissy versions. It has been around some time now, having been issued in 1982 for the Beeb's 50th birthday, but is a worthwhile addition to anyone's theme library.

It seems no video releases of old programmes have been forthcoming recently. Apart from those you mentioned, there are relatively new items such as the BBC's Forsyte Saga (if you are willing to pay £11.99 a throw), not to mention a new compilation of Bill and Ben, and a tape of The Herbs (now 22 years old) - bring back Bleep and Booster! From "the other side" come such classics as "The Prisoner", and much Gerry Anderson material.

And so under a barrage of exploding mains filter capacitors, piercing line whistles and burning dust, it's back to the TV restorations!

From Frank Peplow, Birmingham:

This issue of our newsletter is absolutely fantastic - bravo. This must have taken some time to put together.

Er, yes. You're right!

From Bob Jones, Croydon:

I have obtained the BBC Engineering Monographs by George Hersee (nos. 21 and 69) as mentioned in your video. I was pleasantly surprised to receive original copies as I really only expected photostats.

The BBC inform me that they can supply all originals except for two of the series. I shall order a few more [from BBC Publications], as there are certainly some subjects of interest amongst those monographs.

From Gary Platten, Craghead:

I received the second newsletter last week and enjoyed it, can't wait for the next one. Anyway, I thought you and the gang might like to hear about the reliability of a set which I have in my possession.

An old lady who is a friend of my aunt asked me to look at her old black and white set which had broken down. The set in question was a 17" Stella dating from about 1959/60. The set lit up but there was no picture or sound, she said. When I went to see it I switched on and was greeted by a blank white raster. I was going to check the tuner, supplies, etc. when the penny dropped, the date was 5th January 1985.

I then realised what was wrong, the transmitters had closed down. She was very disappointed because the set was like an old friend but agreed to have a nice 24" Philips single standard from me. She told me she had bought the set second-hand in 1964 (the year of BBC2) and it had worked perfectly until 1981 when it required a new valve.

It then worked up till 1985 when it was forced to retire after 21 years service. I have the set in question, which still works and it will probably have to be shot, ha ha. Anyway keep up the good work.

From David Boynes, Tyne & Wear:

I have been investigating the suitability of VHS for recording 405 line material.

To date I have made recordings on various VHS machines and have found the earlier models best for 405 line recording. They are the Ferguson 3292, 3V00, 3V22, 3V29 and 3V30 (switched to black and white only). Other Ferguson models used for recording are the 3V31 and 3V35/6: these machines have made excellent recordings, however, when playing back a ghost image appears. In fact these recordings can be played back on the earlier machines without the ghost appearing. Shortly I will be trying the Ferguson 3V44, which is the pre-HQ machine of late 1984. Of course the Ferguson video recorders have JVC equivalents: 3292 = HR3300, 3V00-22 = HR3330, 3V29 = HR7200, 3V30 = HR7300 and so on. Modern Sharp recorders like the VC651 will not handle 405 at all, while the Samsung V1521 is very good indeed. I hope people will find this information useful.

At the Harpenden BVWS meeting I acquired a Peto Scott 8" multi-standard monitor: I have wired it for 405 line operation only, taking its input from my standards converter or to a video recorder. Shortly I will be assembling three system A modulators based on the David Looser design and one modified for channel B4.

Very useful information, David. I too had seen the slight ghosting on VHS playback and mistakenly assumed it was a fault in the standards converter. Now I guess there will be a sudden rise in demand for (and the price of) ancient piano key VHS recorders!
[AE]

From Steve Ostler, Sedgeberrow:

In connection with your request for

information on valve suppliers, I have found that PHILIP TAYLOR (03706 - 598) gives an excellent postal service. He holds extensive stocks and I have never had a faulty valve from him.

Thanks, Steve. Does anyone wish to nominate other "good guys"?

From Philip Beckley, Bettws, Newport:

I am refurbishing an old Premier Radio kit receiver, circa 1950 (VCR97 tube, etc.). I want to be able to show off-air pictures on it. At present I plan to

- a) upgrade line timebase to 625 lines,
- b) feed video from my VCR to the video amp of the set with suitable phasing, etc.
- c) feed sound from my VCR to the audio section of set.

This ignores the RF section of the TV (it's a 66 MHz Wenvoe TRF line-up).

It would be nice to downconvert UHF TV to 66 MHz and put in an intercarrier sound FM demodulator and alter video detector for correct video polarity. Has all this been done already? If so, it would be very helpful to get a look at designs to save me starting from scratch.

Your question is a very interesting one, the more so because you have a nice scarce set. I have printed your letter in the hope of stimulating all sorts of replies. My own sincere advice would be don't do it! It is tempting to want to have an ancient TV displaying current programmes, but once you have destroyed the set's originality (and what you're proposing sounds like a lot of hard work), you can never put it back to its genuine original state. Far better to restore it in its current state, build (or buy) a modulator and put genuine 405 line programmes (off tape) through the TV. But that's only my opinion - what do other people

think? [AE].

From Alan Keeling, Oldbury:

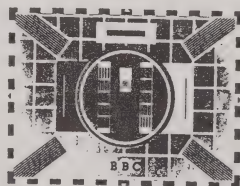
I am sure that a great many TV service engineers who were around in the late fifties and early sixties will remember those service slides or test pictures transmitted intermittently with Test Card C by both the BBC and ITA during morning trade tests.

The BBC pictures I can recall were Trafalgar Square, Brixham harbour, Paignton harbour, Newquay beach, Loch Lomond and a couple of views of the Television Centre. On each side was superimposed the caption BBC TV TEST TRANSMISSION.

The ITA slides varied from region to region, but I do recall a slide of Ludlow bridge which was used from 1962 to 1964. In 1964 these pictures were withdrawn prior to transmission of Test Card D.

Does anyone out there have any photographs of these?

I think we'd all like to see some of these again - perhaps someone can even turn up the genuine slides? [AE]



TELEVISION NEWSREEL

RTS WANTS HELP

The Royal Television Society is looking for someone with a good knowledge of the history of television to help them catalogue their records and assemble this data (see issue 2, page 9). It is, the society suggests, a long-term project requiring a day or two a week, and for someone who has perhaps retired and is looking for something to keep their mind active it would be ideal. They have no resources to pay a salary but they would of course pay expenses.

If you can help or have any ideas please contact Clare Colvin, the consultant archivist at the Royal Television Society, Tavistock House East, Tavistock Square, London, WC1H 9HR. Telephone 01-387 1970.

"AERIAL" and BVWS SUMMER SWAP MEETS - A REPORT

Held on Sunday June 18th at Portishead, near Bristol, the first of these turned out to be a pleasant "do", helped to no small extent by the glorious weather. While there was not too much TV equipment on sale, prices were not too high. "Trader" service sheets could be had for 20p each, Band III converters for £1 and books on TV for £2 to £5. Isn't it amazing how many Band III converters have survived, but no worry, they're a useful source of valves, knobs and vintage mains cable for restoring other things and at £1 you can't say you were ripped off. A Bush TV22 in fair condition was on offer at £130 but I don't think it sold.

Bill Journeaux and his friend Terry Burnett brought along a TV22 and a 405 line TV modulator, and ran a continuous demonstration of vintage TV viewing as well as handing out publicity for 405 Alive.

The following Sunday activity centred on Harpenden and the BVWS swapmeet, a somewhat larger (and more commercial) event. This is always a good place to meet other 405 Alive people and for handing out leaflets to the unconverted.

David Boynes had a superb display of his 625-405 standards converter in its latest incarnation. It was feeding an old Bush 13-channel set and performing very well, even off VHS tape material. Your editor was disappointed by the extortionate prices some stall-holders were asking for commonplace items, and others were heard to suggest the former hobbyist spirit of this occasion had been pushed out by straightforward money-making. A couple of TV22s were seen at silly prices and I understand a very tatty and incomplete pre-war set was sold in the auction for a high sum. The blatant commercialism of some so-called enthusiasts put a bit of a damper on this occasion and coupled with the difficulty of parking, the interminable queues for refreshments and the cavalier attitude of some of the officials, it is no wonder that some visitors were heard to say this would be their last trip. I bet I'll see them there again this autumn though!

STACEY HILL OPEN WEEKEND (September 16/17)

Depending on how soon I get this issue out, there may still be time to visit the last Stacey Hill event of the year. So if you are looking for a day out, you might like to consider a trip there. The Stacey Hill Museum is an industrial and rural history museum at Wolverton (not Wolverhampton!), near Milton Keynes (close to the M1 motorway and A5 road). If you go on a Saturday you might care to combine the trip with a visit to Milton Keynes (largest undercover shopping centre in Europe) but then again, you might not!

Anyway, the collection is huge, ranging from old tractors and lawnmowers to railway coaches and steam tram relics; they have restorations of an old-time baker's, a dairy and a printer's shop, as well as stationary engines. Of particular interest to 405 Alive people will be a collection of old radios and TVs, also a lot of old telephone equipment. The opening hours are 11.00 AM to 5.30 PM. A modest admission charge is made. The museum is in an old farm in Southern Way, Wolverton. If you make for Wolverton station or town centre, you will find the museum about 3/4 mile south west of here. Southern Way is off Stacey Avenue, if that helps. It is not so easy to find the way from Milton Keynes itself, so I suggest you head for Wolverton and ask then!

DESIGN MUSEUM OPENS

Europe's first museum dedicated to the study of form and design has opened at Butler's Wharf, just downstream of London's Tower Bridge, on the Surrey side. On the same day I was astonished at the prices charged at Camden Lock I paid a visit to this new attraction and spent a very pleasant time there. Unlike some museums, this one is not free. In fact they relieve you of £2 but I found the displays absolutely fascinating. Part of the exhibition is permanent and the rest is not (obviously, really). Television sets (and radios) are one of the medium-term displays, so you should get along there in the next few months. A good selection depicts the changing form of the TV from early post-war examples and tries to explain why the shapes and materials had to change and evolved into what we see today. Some of the dates on the captions are wrong, but the whole thing is well worth seeing if you are in the area.

ANOTHER DAY OUT

405 Alivers are probably well familiar with the Museum of the Moving Image in London and the National Museum in Bradford. Here's another attraction which is not exactly old, but still likely to interest you. I haven't seen it myself, so I'll welcome reports from readers!

It's the Granada Studios Tour in Manchester, where you can "step into the world of television" and visit all the studio sets and a lot more. Sets you can actually tread include re-creations of Coronation Street, Checkpoint Charlie in Berlin, Sherlock Holmes's Baker Street, Downing Street, a corner of New York and a giant's kingdom. You can play with a TV control desk, buy souvenirs and eat and drink in congenial surroundings. The site is open every day until October 1st, then from Wednesday to Sunday. Admission is a stunning £5.95 (adult), £3.95 (child), with reductions for families and senior citizens. Location is central Manchester and a colour leaflet and further information can be had by ringing 061-833 0880.

NEW MAGAZINE

Those of you who subscribed to **The Radiophile** will know that Chas Miller's writings will now appear in a new publication, **Radio Bygones**. Edited by Geoff Arnold, formerly editor of **Practical Wireless**, this new magazine is due to cover the whole field of vintage radio, audio and video. We wish it well and look forward to co-operating to our mutual benefit. The new magazine is out now and can be found in some radio shops. It is also available by subscription, so why not send an SAE for details to Radio Bygones, 8a Corfe View Road, Corfe Mullen, Wimborne, Dorset, BH21 3LZ. *[This address has now changed - see back cover - and The Radiophile is once more an independent publication.]*

WHERE YOU ALL LIVE!

At this point I was intending to print a list of subscribers' home towns but with 77 I realised it was going to take up too much space. Suffice to say one of you lives in Belgium, six are "particulars withheld" and the rest are scattered about Great Britain. If you would like to know if there is another enthusiast living near you, please drop me a line with a stamped addressed envelope and I'll send you details.

RESEARCHING OLD PROGRAMMES

Although the proportion of old programme material on sale in video shops is small, there is in fact quite a reasonable selection preserved in official archives. While this material is not on sale nor accessible to the casual viewer, some of it is nonetheless available to serious researchers. Even where it is not, it may give you a slightly warmer feeling to know that these programmes have been saved for posterity.

There are a number of books which may help you if you start to track down this vintage material. Here are some titles:

RESEARCHER'S GUIDE TO BRITISH FILM AND TELEVISION COLLECTIONS, published by the British Universities Film and Video Council (ISBN 0 901299 40 5). A new edition should be out by the time this appears in print, so enquire the price - it should be around £10. The 176-page book lists all major film libraries and TV stations, together with phone numbers, addresses, general guide to holdings and an indication of organisations' policies on loaning material. Their address is 55 Greek Street, London, W1V 5LR (01-734 3687).

BRITISH FILM INSTITUTE FILM & VIDEO CATALOGUE, published by the BFI, 21-28 Stephen Street, London W1P 1PL. Price is £4, for which you get a large paperback (192 pages) listing every film and TV programme available on loan from the BFI. Most are on 16mm film, but some are on tape. These programmes may be hired by organisations and, apparently, even by private individuals, which is good news. The fees are not inconsequential though!

KEEPING TELEVISION ALIVE (by Paul Madden), subtitled "the Television work of the National Film Archive" and published by the British Film Institute (ISBN 0 85170 113 2), price £3. A comprehensive description of TV programme archiving activity in this country, together with a list of all programmes preserved. To most of the latter there is no public access, however.

And now for the first of two stories of unusual private television stations which took to the airwaves in the past ... The second article should be ready for issue 4.

BRISTOL EDUCATIONAL TV

by Andy Emmerson

BRISTOL COLLEGE TRANSMITS TV

Transmitting equipment build by Mr E.H. Davies of Bristol Technical College, assisted by some of the students, is currently being used to broadcast regularly from the College, every Wednesday from 2pm to 6pm. It is eventually hoped to provide educational TV programmes catering especially for local needs and interests, for reception mainly by schools in the area. Already television sets belonging to local schools have been converted to receive the transmissions which are on a frequency of 432.2 Mc/s specially allocated by the Post Office.

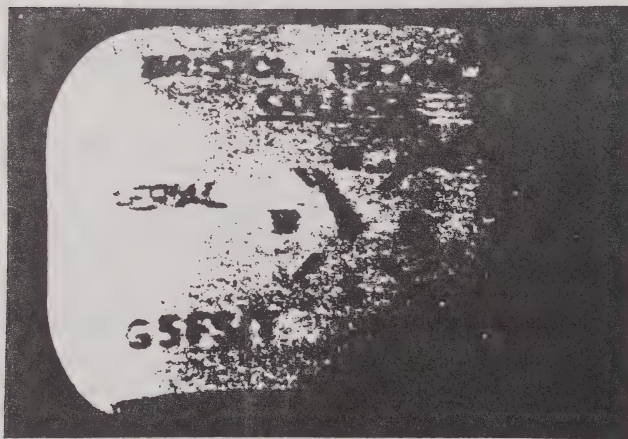
The equipment operates on the 405 line standard, but as more 625 line receivers are introduced it is intended to convert to the new standard. A transistorised camera supplied by EMI Electronics Ltd is used to televise the subjects for transmission.

The above article (Practical Television, page 389 June 1964) caught my imagination many years ago, mainly because it appears to be the only time non-BBC/ITV television broadcasting has been licensed in this country. Transmission is, of course, permitted under Amateur and Test & Development licences but this is always to another particular station or stations, and not broadcasting in general, which is specifically barred in those licences.

Anyway, I managed to track down Ernie Davies, who retired ten years ago. He had to scratch his head a bit and then he told me the whole thing started as an experiment in amateur radio and television at the college. Later on the authorities suggested he link up with other schools. Unfortunately there was no finance for the project and it started to absorb too much time; in the end it died a natural death. (The college's amateur radio station, G5FS, has been revived lately, however.) The station used Mr Davies's own callsign G6ABZ/T or more normally the college's call G5FS/T. It was run from the college's Kingsdown annexe. Transmissions were 405 lines of course and were picked up not only locally but as far away as Portskewett (across the Severn in Wales) and in Plymouth.

[Many thanks for assistance from Ernie Davies and Phil Brouder G3ZJH (Brunel Technical College).

TWO SCREEN SHOTS OF BRISTOL EDUCATIONAL TV



Note the ingenious display showing the antenna beam direction. This photo was taken by GW3ATM at Portskewett (near Chepstow, Monmouthshire) on February 5, 1964.

BBC TV TEST CARD MUSIC - a personal view in three parts

by Paul Sawtell A.M.B.I.I. M.P.A.

Part two - 1964 to 1972.

If you read my last article you will have followed the history of 78 rpm gramophone records through to the first tapes used with Test Card C.

Now we pick up the story from 1964. This was the year when BBC2 began - we all know that due to a technical cock-up their first programme was Play School, but who remembers the test card music? Well, I have to confess that we did not acquire a BBC2 set until 1968 so my collection of recordings does not feature any early BBC2 music. However I again have some Programme as Broadcast lists for early BBC2 so I do know what went on. If anyone has any records issued by the New York publishers SESAC between us we can put some old tapes together!

Again, all these tapes as well as the ones over on the newly-christened BBC1 were 30 mins in duration but the opening BBC signal had been dropped. Probably some of the most famous test card music was used at this time: BBC1 had Cliff Hammer & his Golden Spinet playing *Swinging Spinet*, *Playtime* in Tokyo, *Dancing Through the Night* and *Showtime*; classical greats included an arrangement of Smetana's *Slepika* played by the Oslo Philharmonic and retitled *The Merry Chicken Yard*; BBC2 had two rather awfully played guitar tunes which caused me much amusement (still do in fact!). For those who collect titles, they were *Mon Village*, *Mon Paris* and *Paris* played by the Roby Davis Ensemble. On the more serious side also on BBC2 was Peter Hope's *Ring of Kerry Suite*; lovely light music of a type seldom heard in today's pop-crazy culture.

It was also at this time an absolute classic of a tape had its first airing on BBC1 from the great veteran of contributors to test card tapes, the Frenchman Roger Roger. This started with *Asia Minor* and featured many splendid 20th century style classical compositions by the man himself. The tape was so good, after it had been discontinued the BBC decided to give it another run in 1971! The test card music saw the introduction of the colour service on BBC2 in 1967 and BBC1 in 1969 without so much as a murmur, and still going strong. To keep the test card company on BBC2 were items of Service Information, the fascinating *Trade Test Colour Films* and not forgetting the classic of all time, the *Colour Receiver Installation Film!* (I would dearly love a copy of this). These films were transmitted regularly by BBC tv from 1954 up to September 1973 and were supplied to the BBC by such organisations as Philips, BP, Shell, Shell International, the Gas Board, Ford, British Rail, British Steel, the New Zealand National Film Unit, ICI etc etc.

I should give a mention to the part of *Trade Test Transmissions* which irritated many a potential collector of test card music recordings, the tone. This was in fact the most useful part from the engineer's point of view sound-wise although it did mean the tapes were very rarely played to the end. The tone would be transmitted for four minutes followed by one minute of silence every

twenty five minutes whereas the trade tapes lasted for thirty minutes. You had to catch them in a really good mood if you wanted to record the tapes right to the end.

All went pretty much the same as it had since 1964 until Monday May 29th 1972 (BBC2) and Friday August 4th 1972 (BBC1). A change in tape speed at the BBC from 15 ips to 7.5 ips meant that 60 minute sequences could be compiled instead of the old 30 minute ones. Some tapes (notably the BBC2 ones) lasted for an average of 72 minutes, and one tape on BBC1 ran for 75 minutes! Along with this change was the sad loss of the BBC signal - it was almost as though the hallmark had been withdrawn. There were six new tapes on BBC2 in the May, and three on BBC1 in the August. All in one go! It was quite confusing at first especially as the tone was now being transmitted every fifteen minutes; it was very hard to work out where one tape ended and the next began. Still, all good stuff, plenty of variety!

These hour long tapes will be discussed in the final and third part, covering 1973 - 1983 when trade test transmissions were officially discontinued. Once again, I would like to hear from anyone with an interest in this subject, also anyone who made any recordings and may like to swap some, please get in touch. If you have a copy of the Colour Receiver Installation film then God will surely abundantly bless you in Heaven! You can contact me at 20 Seymour Road, Stourbridge, DY9 8TB. Bye for now.

TRADE TEST NOSTALGIA

by Paul Pearson

I was extremely interested in both Frank Peplow's and Keith Hamer's features in issue no. 1 of 405 Alive. My main interest in television involves the trade test transmissions, particularly those of the BBC. I was also very interested in the ITA opening sequence recalled by Frank Peplow. Being fortunate to live in an area where two Band III ITA stations could be received meant that I could monitor both the ATV and Granada opening sequences. The tuning signal was accompanied by a short duration of tone and then a piece of music. On ATV the tune played every day was called "Sound and Vision".

Towards the end of the music the tuning signal would give way to the station ident and on the ATV network the ident was revealed in a short animated manoeuvre. The music was specially adapted to fit this part of the opening sequence. The tuning signal faded and was replaced by a black screen into which appeared an enlarged section of the top part of the ATV logo. This part of the logo then moved slightly up-screen to reveal the lower "striped" part of the logo. As the music played three appropriate notes the letters ATV were inserted in turn. Finally the legend "Associated Television" was scrolled across the lower part of the screen. This particular version of the ATV logo was larger than that shown at the beginning of programmes. Whenever ATV closed down during the daytime the last few bars of the opening music were always played.

Granada played a longer introduction over their tuning signal in those days. I do not know the title of the music, but if anyone has a recording please let me know as I would like to hear it again. The Granada ident at the time featured the familiar arrow shape above which was written "From the North" and "GRANADA" which appeared in capital letters each separately placed in a "box". At the weekends ABC Television took over. Another piece of music always accompanied the ABC tuning signal. Again, if anyone has a recording please let me know.

Before leaving ITA, I can recall one occasion in the Test Card D days on Granada, when they were still playing records. The record got stuck and the same notes were played over and over again for quite some time, showing that the trade tests were not perhaps monitored very closely.

I much preferred BBC Trade Tests. They used taped music and had the famous BBC chimes. Trade Tests always commenced at 9.00am, except Sundays, and the test card would be shown until 2½ minutes prior to the published programme commencing time. The first programmes would be for schools, or in the school holidays, Watch with Mother, which usually commenced at 10.45am. After morning programmes there would be a return to the test card until lunchtime.

In Test Card D days, as I call this era, the lunch time programme was often in Welsh, there would also be "The News" and the final programme which usually commenced at 1.30pm would be "Watch with Mother". After this there would be a public information film then Closedown. A blank screen was shown until 2.00pm when the test card reappeared. If it was school holiday time and there was no Cricket, the test card would continue through the afternoon until about 4.38.

Jackanory began at 4.40pm. If cricket was scheduled and the inevitable "Rain Stopped Play"^m caption appeared - no highlights in those days - then it would be accompanied by test card music. The BBC's programme opening sequence usually lasted for two minutes. A variety of different tunes accompanied this sequence and they always lasted just under two minutes. The exception to this was just before the first schools programme when a five minute opening sequence was adopted. Each schools programme was preceded by the same caption and two minute tune.

It appears that prior to the first schools programme of the day the caption and two minute tune were given their own introduction which lasted three minutes.

On Saturdays there was no Children's morning television. For about an hour from 10.00am there were usually programmes giving instruction in foreign languages. After these, again if there was no Cricket, the test card would be shown until lunchtime when the weatherman appeared, followed by Grandstand.

If you can help Paul in his request for the opening music of ABC and Granada TV please drop him a line in the first instance, at 10 Osborne Road, Hartshill, Stoke-on-Trent, ST4 7PF.

AND MORE ON A MUSICAL NOTE ..

ITV STATION IDENTS

There seems to be a lot of interest in the themes which each regional ITV company commissioned - hopefully an expert among us will step forward. In the meantime, this is a summary of what various people have mentioned in letters ...

Station	Title	Composer
ABC	And so on and so forth	
A-R	?	Eric Coates
ATV	Sound and Vision	Eric Coates
Grampian	Grampian March	
Scottish TV	Scotlandia	(note 1)
Southern	Southern Rhapsody	Richard Addinsell
TWW	The Seven Seas	Eric Coates

Notes:

1. Played by Geraldo and his Orchestra

Please note: all this is subject to correction: any experts please make themselves known! Clearly Eric Coates's music was flavour of the month in those days.

ERIC COATES

Stuart Montgomery has kindly done a bit of research on this composer and come up with the following. After all these years I now know why the ATV theme sounded so similar to the Dam Busters march - I always assumed this was musical plagiarism at its worst! [AE]

Eric Coates 1886 - 1957

Born and bred in England, Eric Coates took violin lessons from the age of 6, and when he was 12 he studied with Georg Ellensberger in Nottingham. He entered the Royal Academy of Music in 1906.

He was to gain much experience with various theatre orchestras and in 1908 joined the Hamburg String Quartet for a tour of South Africa. As a composer, he decided to turn his concentration on light music and conducted concerts of his own music in Britain and abroad.

The popularity of his music received its greatest boost when the march "Knightsbridge" (from the "London Suite") was adopted as a radio signature tune. Coates was an outstanding exponent of agreeable light music, which, though of an unadventurous nature, displayed his sincerity, his thorough craftsmanship, and his imaginative orchestration. He was a founder member, and later a director, of the Performing Rights Society.

Below is a very short list of some of his output.....

Orchestral works

- 1911 Miniature Suite
- 1915 From the Countryside
- 1919 Summer days
- 1922 Joyous youth
- 1927 Four ways
- 1932 From meadow to Mayfair
- 1933 London every day
- 1935 The 3 men
- 1937 Springtime
- 1944 The 3 Elizabeths

Films and concert pieces

- 1930 By the Sleepy Lagoon (sig tune to Desert Island Disc)
- 1930 Dancing nights (concert waltz)
- 1939 Footlights
- 1955 The Dambusters (film score)

....and dozens of Victorian type songs including 1916 The Green hills o' Somerset
1926 Birdsongs at eventide

* Information compiled here by Stuart Montgomery RSAM, LRAM and collected from the **New Grove Dictionary of Music and Musicians**, edited by Stanley Sadie.

TEST CARD C

The tone accompanying test card C on the BBC was 440 cycles (nowadays it would be hertz, but in those days ...)

MY MUM, THE TESTCARD, AND ME IN 1964

by Stuart Montgomery, RSAM, LRAM.

"Mummy, when I grow up can I play the piano on the Testcard?" Such were the beginnings of what quickly became a magnificent obsession - a powerful influence on my life, and above all - my only real friend. I have no brothers or sisters and throughout school I was painfully shy - this clever-looking picture with its bright and jolly music fascinated me - I honestly thought - at the age of 5 - that a band came along every morning at 9 to run through the pieces they were probably doing for an important concert coming up - how wonderfully innocent, but it has stuck in my mind ever since. I really have so much to thank mum for - she would sit me in front of Test Card "C" and get me to count the

lines - I ask you!!!! She said there were about 400 (!) and it would take me a while to find them all - I tried - but I could barely count to 88 - never mind 400!!!!!!

Soon the music took over and once I got a two-track tape recorder I was "on the air" in my own bedroom - the tape recorder was my new friend. Through school days, college, and the last 10 years of my professional life, I have remained loyal to my hobby and have a collection of tapes which have become like clothes in the wardrobe - all leading a life of their own - coming out for any occasion I care to have - especially dinner parties! Even today, in the evening of the Test Card you might say, I operate my own TTT's or trade test transmissions with videos and sound sequences just the way they use to be. It's, well, just a part of my life really.

I haven't quite managed to pull off my ambition from way back in '64, but I do enjoy playing the piano professionally, and when I'm asked I love to do music hall playing or band playing in amateur musicals - so it's almost full circle!

I always knew I'd meet somebody to talk to - someone to understand - someone to laugh with about all those frustrating, wonderful moments trying to record the newest tape when you knew the tone was coming up. I even started creeping into the school tv room to switch on the telly and see/hear what was going on trembling at the thought of getting caught - the damned machine took so long to warm up!! Then I would know which tape would be playing when I got home! Well...that's if they got the rota in the correct order! Somehow I could often tell when the tone wasn't going to cut off the tape - may be I became psychic to it all - not like ITA who use to just whip the music off and on the tone came - as fast as they could get it on - I never ever took to the lot on this side - it seemed so clinical - so matter of fact - and the way they would "sign off" and isolate their Trade Tests was very nasty. However I did like "The Breeze and I" at 9.35 most days!!

For me it was such a solitary thing and I wonder if any of you can relate to me the same feelings - that feeling of reassurance at hearing the BBC signal every few tracks, that feeling of security in knowing every sound you heard with the various test cards used.

I would love to hear from anyone about their stories and encounters in recording tapes, all the little niceties and observations etc. Please write to me at 2 Henderson Row, Edinburgh, EH3, 5DS.

CLEANING AND RESTORING OLD TV AND RADIO EQUIPMENT - SOME PRACTICAL ADVICE

These notes are based on material originally written for the Telecommunications Heritage Group. Some new information has also been added.

First thoughts

Strangely enough (or perhaps it's not so strange) there is no real agreement on how far you should go with restoration and refurbishing. Obviously you want to remove dust, cobwebs and rust - but what about substituting more modern parts or replacements from another or different model? Is it legitimate to rebuild a TV with entirely new innards to make it work on the 625 line system?

The answer is, it depends. If the item is really rare, you should do only enough work as is necessary to conserve it, and if this means using non-original parts then that is justified but you should avoid making something which is obviously old look too "new". Wholesale rebuilding is another matter: if the item is not rare you are probably justified in doing this, and you will have to follow your own personal judgment in what you do. Gutting old TV22s to make into "quaint" TVs for yuppies would be considered sacrilege by most collectors! In the main, sensible conservation should be your goal: make the item work, make it look cared for but don't go mad trying to disguise its age.

Cleaning

Cleaning is not difficult in general. You should of course be prepared to spend a bit of effort on really dirty equipment, and it would be silly to

ruin a really rare item by cleaning it in a careless manner. With skill and care (no misapplied enthusiasm please ...), the following methods should work for you as well as they do for others. They apply equally well to many other kinds of apparatus, of course.

Transfers

Be ultra-careful not to rub away or dissolve any transfer lettering. It is better to protect this with matt varnish or wax polish before attempting any heavy clean-up jobs. The transfers beneath glass tuning dials is often extremely delicate and even screen printed legends on instrument panels may soften and dissolve under foam cleanser. You have been warned!

Woodwork

Remove all dust with a dry or damp cloth, and only if the wood is filthy dirty get tough and use steel wire wool soaked in T-Cut or similar car paint restorer. Avoid too much water as this may stain the wood or cause it to swell and warp. If the wood is very dry it will need rejuvenating with a furniture restorer such as Scott's Liquid Gold. This is a kind of liquid paraffin and wax mixture, which is allowed to soak into parched wood. If cabinet work was originally stained and has faded badly brush on Colron wood dye of the appropriate shade.

Occasionally the polish on wood may have dried out and deteriorated so badly it must be removed chemically with Ronstrip or some other stripping compound. Extreme caution is suggested and for valuable items it might be better to take them to a professional furniture

restorer or french polisher.

The decision must now be made whether to varnish or to polish, and this depends upon the original finish. Some woodwork is covered with a tinted varnish (or cellulose lacquer) and you could try and touch in cracks with a matching modern coloured varnish (there are lots of these in do-it-yourself shops). The trouble is that modern polyurethane varnishes do not blend in well with older finishes: they are too glossy, while matt finishes are not right either. Much woodwork has a french polish effect (probably some kind of spirit-based product). To restore this and other old varnish finishes a "friendly" substance is button polish, which you can buy in old-fashioned hardware shops. I believe this is shellac and colouring dissolved in methylated spirits. Whatever it is, it works well. You rub this on with a cotton wool pad and get a very authentic effect. When it is dry you can judge if another coat is required.

If the original woodwork has a smooth polish finish, ordinary wax furniture polish will be found to be adequate. Quite often, though, I first put on a coat of brown boot (shoe) polish as this gives a richer, deeper appearance. A final wipe with a soft duster should finish the job, which should never be rushed. If you are in doubt, a few trials on the underside of the woodwork will not go amiss.

Metalwork

To clean brass, chrome and nickel use an impregnated wadding such as Duraglit, or if it is really dirty use a cloth and either a liquid cleaner like Brasso or a paste such as Solvol Autosol. All these will clean the metal so that it needs only a polish with a soft duster to look perfect. If the metal is corroded do not use emery cloth (the scratches will be all too visible) but instead use a very fine

grade of wire wool or a glassfibre scratch brush (from large ironmongers) to remove verdigris and other dirt without ruining the original finish on the unaffected areas.

Scratches on chemically blacked aluminium (e.g. TV camera lenses) do not look right if painted over - instead you can use a (poisonous) liquid called Metal Black from Carr's Modelling Products (081-946 5038). A small bottle costs £2.76 plus 50p postage - ask for the aluminium version as Carrs sell fluids for blackening steel, nickel silver and brass as well.

Japanned and stove enamelled finishes (as used on test gear cases) are best cleaned with car paint restorer (T-Cut, Color-Bak, etc.); avoid rubbing too hard if transfers are visible. It is seldom advisable to strip and respray, better to fill the scratches with an enamel paint like Humbrol in little tinlets. If this looks too glossy afterwards rub over a bit of cotton wool soaked in Thawpit, which will make it look duller. Smooth Hammerite paint will adhere where others do not cover very well.

Bakelite and other plastics

Cleaning should precede any physical restoration of plastic mouldings. Degrease first, if necessary, with ammonia or methylated spirits and a hard cloth. Bakelite and other plastics which are only lightly soiled should be cleaned with British Telecom Paste Polishing No. 5 (now sold as Bake-o-Bryte by **The Radiophile**, see back cover for address). This is a waxy polish compound, with a mild abrasive, and extremely effective. Everyone who sees this cannot believe how good it is, far better than the metal polish that people used to use to clean bakelite! PP No. 5 is the stuff the GPO formulated for refurbishing old bakelite phones, by the way.

It should be rubbed on with a hard cloth, then removed and buffed up with a soft cloth. Alternatively you can use Solvol Autosol or similar paste (remove with white spirit) to rub down to the clean plastic underneath, but this always leaves a white powdery deposit which is difficult to remove from cracks and mouldings.

An even harsher remedy is a liquid abrasive, either Bluebell metal polish or a car paint restorer like T-Cut or Color-Bak. Rub this on hard with a J-Cloth and allow it to dry to a dirty white powder. When really dry, wipe it off with another clean J-Cloth and buff up with a duster: you should find the bakelite really gleams. A disadvantage of this method is that yellow deposits of the polish are left in cracks and look unsightly. Also, these chemicals are not safe to use on certain coloured plastics as they will attack them.

Small cracks and chips can be filled with soft furniture restoration wax, boot polish (my favourite) or car body fillers (cellulose paste or fibreglass resin types). Clean breaks can be joined with Superglue (cyanoacrylate) or Araldite (epoxy resin), though care is needed to prevent smears of glue showing.

Finally, assuming brown bakelite, using a paper towel rub in brown shoe polish generously, so as to fill all pores and cracks. Five minutes later remove the surplus with a paper towel and buff to a high gloss with a soft cloth. The boot polish gives a superb shine and is not dirty when buffed up. You may end up spending a lot of time and getting your hands dirty in this process but the results are unbelievably worthwhile.

Restoration

This, as already hinted, is a vexed subject, and carried too far can easily spoil an item. A few

collectors do not allow any restoration - they want equipment in "as found" condition, and if cables are frayed or parts missing this adds to the authenticity of the thing. Of course, if you are not prepared to replace electronic components you probably won't be able to operate the device any more. Some collectors go the trouble of hiding new components (such as electrolytics) inside the old ones, having first scraped them out, but that's too much like hard work for most folk.

Other collectors subscribe to a different viewpoint, saying their cherished items were not in dirty "as found" condition when they were new or in loving use, and they do not get displayed like that in any self-respecting museum. And in life, when a TV failed, it was repaired with entirely new components by the local dealer/service man, so why not continue to do this now? However, this is a point argued about long and often. Most collectors are prepared to replace parts from other sources if they will enable the equipment to function properly and will try to ensure all their treasures are capable of working. What's more, they try to run them up every few months to exercise the components and avoid deterioration of capacitors etc..

Sources of spares

Finding parts for restoration such as CRTs, valves and knobs can sometimes be difficult nowadays, and you may have to cannibalise two items to make one good one. Never throw any parts away! You may also be able to swap unwanted parts with fellow collectors. (Use the small ads in this magazine - they are very effective most of the time.) The Vintage Wireless Company in Bristol sell reproduction transfers: these are intended for radios but some designs may be suitable for TVs as well. If you feel only vintage components should be used in your restoration, Kenzen in Birmingham is

a good source. (See preamble to Market Place section for phone numbers.)

In general it is always good sense to change capacitors, since these often go leaky or change value over the years. Any electrolytics showing bulging at the top of the can must be replaced (they're dangerous in that state). I also replace any wax-covered paper capacitors and any Hunts black or brown-coloured plastic tubular case ones (these are invariably suspect). Charred resistors are another obvious candidate for replacement, and any high-value resistors (say 1 megohm or more should be checked in case it has increased in value or gone open circuit.

Mechanical work is seldom required; occasionally old grease dries out and causes bearings and switches to move stiffly. Re-lubricate as necessary. "Sticky" dials and switches usually respond to a quick squirt of WD-40 or similar penetrating lubricant, if not something has probably broken and you will have to do a full disassembly job (tedious!) followed by washing in white spirit, carbon tetrachloride (watch out for fumes) or petrol. Afterwards lubricate the re-assembled item with watch oil. Tandy shops sell a micro-spout oiler containing oil and teflon particles for a very moderate price.

Rip-offs?

When you are buying, beware of restored apparatus which may contain totally unauthentic or non-functioning components: be critical. There is nothing wrong with reproduction transfers and parts, of course, so long as they are declared as such.

And after all this - good luck! Let us know about any interesting or successful restoration projects you have been involved in.

Be controversial, too: if you think there are fakes and rubbish on the market, please tell us all!

BRITISH RADIO AND TELEVISION

MAY, 1953

625-line Transmissions Planned

SPEAKING at the Television Society's annual dinner in April Sir Robert Renwick, President of the Society, said they would soon be building an experimental 625-line transmitter to provide a service to both the radio industry and amateurs, so helping the export market.

It was realised that receivers intended for the Continental standard of 625 lines could be more conveniently demonstrated and tested on a radio signal under working conditions, and with the approval of the radio industry the Society have undertaken to operate a suitable transmitter.

Discussions are to take place soon between the Society and B.R.E.M.A. on a suitable site and design of the equipment.

DX-TV - VINTAGE STYLE

by Andy Emmerson

Not unnaturally, we think of long-distance (DX) TV reception as a modern pastime and not as a phenomenon that happened in the past, but a recent article by Keith Hamer and Garry Smith in **Short Wave Magazine** (February 1989, page 11) corrected my first impression. In this article the authors stated "405 line receivers were shipped from the UK to North America in the hope of receiving transmissions from the transmitter at Alexandra Palace. The experiment proved a success and at times both sound and vision signals were monitored at 41.25 and 45 MHz respectively.

The signals were studies at Riverhead (Long Island) in New York between 1936 and 1939. The receiving antenna used consisted of a horizontal rhombic some 45 feet above the ground, directed towards London. The length of each leg of the antenna was 400 ft. The major and minor axes were adjusted to give maximum response to a signal arriving at an angle of 6 degrees. The effective height of the antenna system was about 63 feet. Most of the observations took place between 09.45 and 11.30 EST. This corresponded with the afternoon schedules of the BBC. On numerous occasions the transmissions continued until noon or thereafter.

The images observed appeared to exhibit selective fading as the contrast of the picture would often change between wide extremes. Multi-path propagation would mar the picture in two ways. Firstly it would cause repetition of the picture content and secondly, it would result in more than one set of horizontal synchronisation pulses, making it impossible to obtain a steady picture.

In the meantime I have had the opportunity to do a little more digging and some further details may be of interest ...

A photo of a lorry-load of Cossor receivers on their way to New York appears on page 467 of **Television and Short-Wave World**, August 1938 and these are probably the ones referred to above.

The first DX reception was probably that of Mr C.G.J. Angille in Cape Town, who was receiving the 7-metre signals "very consistently, using very simple equipment" (**TV & S-W W**, July 1937, page 407). The September 1937 issue of the same magazine (page 527) has a detailed article on RCA's reception of the BBC signals at Riverhead, with pictures of the receiving equipment and a diagram of the aerial. Slightly closer to home, the Cunard-White Star liner *Britannic* achieved a first when it received the television signals while passing through the English Channel, 30 miles from the south coast (December 1937, page 723). And in August 1938 (page 482) we find the first mention of British reception of the TV signals transmitted from the Eiffel Tower.

Wireless World (April 1944, page 98) carried a detailed evaluation of the American reception, while their November 1950 issue (page 407) had a review of propagation conditions leading to regular reception at the South African Broadcasting Corporation near Johannesburg. South African reception was also

discussed in "Reception at Extreme Ranges" (**Practical Television**, page 184, July 1950).

On the other side of the world, the BBC transmissions (now from Crystal Palace) were received in Australia (**Practical Television**, page 405 April 1957 and page 520 June 1958 - the latter article illustrated the DXer's antenna setup.) Moving Stateside, the first British reception there since 1937 was recorded in **Practical Television** (page 282, January 1958). First reception was on 1st November 1957, and the pictures included the David Nixon show "It's Magic" (very appropriate really!). They were picked up at the Baldwin, Long Island receiving station of Press Wireless, Inc. - a distance of more than 3000 miles. Over seven days signals were received on six occasions. Further reception in the USA was mentioned in the **RSGB Bulletin** (page 367 February 1958), when Hartland Smith W8VVD of Birmingham, Michigan reported receiving BBC channel 1 between December 8 1957 and January 5, 1958. He used a converter (6AG5 r.f. and 12AT7 mixer) and a modified American TV receiver, together with a two element beam antenna about 18 feet above ground (in the attic). Programmes received included the Brains Trust, Andy Pandy and a Ronald Colman film.

Finally, we Brits are used to receiving Soviet TV via sporadic E. Well, again in the February 1958 **RSGB Bulletin** we read of a Russian amateur, UB5FG in Odessa, who "during the last two months ... has been receiving the 41.5 Mc/s [sound] signals from Crystal Palace very strongly". All of which goes to show that (i) DX-TV is nothing new, (ii) this reception was aided by the relatively low frequencies used and (iii) with today's low-noise receivers we'd have far more DX reception reported, if only such low frequency transmissions were still being put out!

COLOUR TV EXPERIMENTS - SOME REMINISCENCES

by Malcolm Burrell

From about 1957, the BBC broadcast NTSC 405 line transmissions most Monday, Wednesday and Friday afternoons between 15.30 and 16.30, presumably originating from their unit at Alexandra Palace but broadcast from Crystal Palace. There were some night-time transmissions but I never saw those. I believe they had only one colour telecine machine at the time. There was, therefore, a brief interval at about 16.15 to change reels if a lengthy film was broadcast. Normally they'd stick to industrial documentaries like THE POWER TO FLY, DIAVOLEZA, SONG OF THE CLOUDS, HOMEMADE CAR (yes, even then).

Occasionally a feature film might be serialised. Usually it was SHE WORE A YELLOW RIBBON but there was another with Lloyd Bridges about a mountain but I can't recall the name.

Sometimes they'd get away with over-running with feature films and sometimes make it to about 16.35 or 16.40 before somebody (presumably at the P.O.) pulled the plug for an abrupt change to Test Card "C"!

Normal schedule was as follows:

Afternoon	Test Card "C" broadcast nationally
15.30	COLOUR BARS locally generated music from LP, harpsichord or Scottish bands
15.55	Initially colour test card slide (Experimental Colour Transmission) Later, Colour Tuning Signal slide (picture of Sylvia Peters)
16.00	Film
16.15 approx	Interval - music with selected colour slide(s) e.g. "Telephone Box, Eskimo Nell, Woman in hat etc.
16.20	Concluding reel or shorter film
16.30 approx	Caption card "BBC EXPERIMENTAL COLOUR TRANSMISSION" (artist's palette) followed by slide THE END.

Variations included things like "Part II follows Shortly" being scratched onto 35 mm film and inserted in the slide scanner during the interval of SHE WORE A YELLOW RIBBON. Very early transmissions which used the two Marconi 3-tube (RCA) cameras substituted the live programme but this must have been expensive (no colour VTR) to repeat every other day, which probably accounts for the quick change to film material. The "live" programmes consisted of much what is shown in BBC Engineering Monograph pictures - a light entertainment following the same script each time using singer Marion Keene and Elton Hayes - "the wandering minstrel" - I think with a barrow "selling hot chestnuts" (don't say Johnny Morris!). If we ever did a program, it would be interesting to interview these people!

A snippet of these colour programmes can be seen in the 1959 film "This is the BBC" [AE]

In 1961 or 1962, there had been a strong lobby for 625 lines (especially from C.O. Stanley of Pye). It was the time of the last REAL Radio Show at Earls Court and the BBC had rigged a colour studio behind glass panels. I assume they used 625 lines NTSC - I don't know but I saw some excellent pictures of Judith Chalmers on circular-screen monitors. Those huge RCA/Marconi cameras were there although one seemed to be sulking (fallen over?) in the corner. These were the days just before Pilkington but there were already some slimline sets demonstrating 625 line mono pictures plus a very poor colour demonstration from an EMI colour camera around the GEC stand, I think.

Do you remember the Radio Shows ? "All the Fun of the Fair of the Air"! I went to one in 1957 - it was really something with off air and locally generated pictures from pop groups, live studio cameras and even telecine. These were the "magic" days of tv and the BBC frequently broadcast programmes from Earls Court. Think of forgotten names like Spencer-West, Valradio and Ambassador! We had a real electronics industry then but its collapse was imminent - caused not by competition from the Far East but by the credit squeeze of the era and that most people were happy with the sets they had.

I've just remembered later 405 colour. Around 1960 the BBC broadcast colour during the morning test transmissions. These must not be confused with the transmission of a monochrome picture bearing the caption "BBC TRADE

TEST TRANSMISSION".

Usually, around 10.00, there was a switch to an asynchronous Test Card "C" slide - obviously a slide since the edges of the vertical lines were "softer". Every fifteen minutes, this was alternated with a colour slide - again the "Phonebox", etc. This usually continued until about 12.00 but with the nationally generated audio.

Hope this fills a few more holes in the jigsaw. By the way, more info.... in 1957 the cheapest 17" TV was the Pye PTL17 at 63 gns, originally designed for rental but using the printed circuit chassis from the more expensive sets with cabinets by Robin Day. Ferguson "pushed" the 21" screen with the 308T (probably cheapest 21" TV at 88 gns) although its 17" equivalent was very popular at 69 gns. Soon KB marketed the REGINA 24" TV at 135 gns but it was a rare sight. During the "Robin Day" era, Pye marketed the Trio at about 135 gns - radio, 17" TV and record player in "Lowboy" style cabinet.

1957. Spencer-West showed a 9" portable TV. It was never marketed. Philco demonstrated wired remote control with a motorised turret tuner on two 17" and 21" sets. A lot of American influence in their designs, e.g. large tuner knobs etc. Soon they were to briefly introduce a form of cordless remote where a torch could be used to change channels. Not exactly instant... "clunk, clunk, clunk, around the dial from channel 1 to channel 9".

The first REAL portable TV, incidentally, came from Ekco with their very heavy 9" set which had twelve channel tuner and VHF radio and operated from AC mains or car battery. There was a Children's Newsreel presentation showing a guy with a car fitted with a Bush TV22 for picnics...

I intended scribbling a few lines and I've got lost with enthusiasm. I'm looking forward to the next issue of **405 Alive**.

TELEVISION BOOKSHELF

50 YEARS OF TELEVISION (Special issue no. 220 of the EBU REVIEW, TECHNICAL, December 1986). Published by the publications section of the European Broadcasting Union, Case Postale 67, CH-1218 Gd Saconnex/Geneve, Switzerland. Price approx. £4. Paperback, 56 pages.

There are times in life when one kicks oneself for not doing things sooner - usually after a book goes out of print or a record is deleted. Do yourself a favour then and order this one while you still have the opportunity, it is the best collection of TV historical material I have seen in one publication.

Well illustrated, the magazine has feature articles on 50 Years of BBC Television, 50 Years of television in France and a similar article on German TV. Picture articles cover production equipment and TV control rooms, and there are shorter articles on the TV systems of Ireland and Yugoslavia. All in all, a very worthwhile read, so get it while you can. A Eurocheque (available from most banks) is probably the easiest and cheapest way of sending the foreign currency. Check price and availability before ordering.

NOTES AND QUERIES

1. Apart from in the British Isles, was the 405 line system used anywhere else, for broadcasting or any other purpose?

Before the last war at least two other countries experimented with 405 lines. In the Netherlands, Philips erected an experimental ultra short wave transmitter on the roof of one of their factory buildings in Eindhoven and sent demonstration programmes (**Wireless World**, 1st May, 1936, page 451). Ultra short waves are, of course, what we now call VHF and the wavelength was probably around 7 metres.

Television & Short-Wave World (August 1938, page 469) reports that the Czechoslovak Ministry of Posts had built a 405 line TV transmitter. Public televiewing rooms were to be opened in Prague.

The only countries with a genuine over-the-air 405 line service were Great Britain and the Republic of Ireland; in addition there was a Rediffusion cable-only service in Hong Kong, as mentioned above. Before the war a 405 line system was tried out by Philips in the Netherlands and this was transmitted on an experimental basis (described in **Wireless World**, 1st May 1936). "Television for the general public in Italy was officially inaugurated only a few weeks before war broke out. Definition was the same as in this country - 405 lines - and reception was reasonably good up to 20 miles from Rome. Stations planned for Milan and Turin apparently did not go into service because of the war. In Czechoslovakia the Ministry of Posts had had considerable success with experiments in 1938, but the election period and trouble with the German-speaking section of the population kept the authorities pre-occupied. It was planned to set up a station in Prague transmitting on 405 lines so that viewers could buy British receivers. The manufacture of receivers in Czechoslovakia was regarded as too expensive for the small market involved." - John Swift, **ADVENTURE IN VISION** (1950).

After the war experimental systems on 405 lines were built in New Zealand, but the standard was not adopted there. French radio amateurs were allowed to use the 405 line system too.

Other countries used other line standards. France had commenced transmissions on 455 lines in 1937 from the Eiffel Tower, while German inaugurated a 441 line service in Berlin in 1938. The same standard was adopted in 1939 in Leningrad and subsequently in Moscow. Polskie radio and the Telecommunications Institute in Warsaw spent three years constructing a station, began testing in December 1938, and were about to go on the air in September 1939 (line standard unknown). The USA in 1937 chose 441 lines (60Hz field rate) and the experimental tests by the Japanese Broadcasting Corporation and two scientific institutions reached a stage by the summer of 1939 indicating an early start of a service on 441 lines, using American equipment. [updated section]

8. Why did commercials formerly jump at the end?

Not all of them did, but it was true that the last one in a sequence did appear to jump. In "those days" all TV commercials were made on film and played out on a telecine chain. As a network programme might be slightly late in starting, it was arranged that the last commercial in a sequence would end on a still frame, to

use up the time (this is still the case, if you notice). Most commercials had a freeze frame runout in case they were the last used, but these runouts were cut off all but the actual last advert, so you did not see them. Because the still frame runout had to be added on the end of a moving commercial, it was normally obvious where this was done and viewers would notice the jump or jitter. [Thanks to Raymond Orr for this explanation]

Any answers? Any questions? Send your response or enquiry to the editor now (71 Falcutt Way, Northampton, NN2 8PH. Tele: 0604 - 844130)!

STRANGE BUT TRUE

THE GOOD OLD DAYS.

A TV dealer in Weymouth was closing down in about 1965. The old boy (he must have been about 60 then) told me a rather funny story of the good old days. It seems that a customer had moved from the London area, bringing his single-channel TRF set with him and wanted it tuned to the local TX. In Weymouth most people received Rowridge on channel 3 but in parts of the town North Hessary Tor on channel 2 was a better bet. The dealer did the job and returned the set. All was well until the tea-time regional opt-out. By now you will have guessed that the picture was South Today and the sound was Spotlight South-West. Well, he swore it was true. [Tony Emery]

CHILDREN COPY BABY TALK.

It is reported that children listening to the BBC's "Flowerpot Men" on Thursday afternoons are copying the double-talk used by the characters and hold long conversations in the language, thus retarding their education.

Miss Freda Lingstrom, head of Children's Television Programmes, has called for a special investigation into the matter. [Practical Television, May 1953.]

ITV REMEMBERS

This summer we have been assailed with (welcome) repeats of old Thames and LWT programmes to mark the 21st anniversary of these organisations. **Time Out** (issue for week ending 29.7.89) offered the following observation. "We have prised open the ITV vaults to bring you this piquant tale. London's weekend TV station was apparently registered as Thames before they switched to something simple and descriptive like London Weekend Television. Within half an hour of relinquishing rights to this name, the weekday franchisor snapped it up. So what would Thames, as we now know it, have called itself if LWT hadn't decided to change its monicker? Well, there was Tower TV and Capital but the favourite was, wait for it, Central. Well they do say there are only a limited number of names in the world."

TWENTY-FIVE YEARS AGO.

Back in 1964 some TV amateurs were experimenting with long-distance vision links in the 70cm. A 127-mile path was achieved, with signals originating from G3KDD/T in Ely, relayed by G3NOX/T (Saffron Walden), G2WJ/T (Junnow), G3GDR/T (Abbots Langley) to G3OPB/T (Epsom Downs) and others in the London area. [CQ-TV]

THE PERRY COMO EFFECT.

Ron Vansittart mentions this name which was given to the phenomenon first noted on telerecordings of this program. These originated on 525 lines in the States and were then filmed. Afterwards they were played out over here on telecine. When the performers moved their arms this would be seen on our screens as a jerky movement followed by a white comet tail. Apparently this was due to the cumulative lag of the original TV camera tube and deficiencies in the kinescope telerecording. (Kinescope is the American technical term for a picture tube and recordings made by filming the TV tube are known as kinescopes too.)

Many of these old programmes also looked bowed and cramped from top to bottom, suffering from insufficient pincushion correction.



TEST CARD SAGA

Things you probably didn't know about early BBC test cards and music

by Keith Hamer

My interest in BBC Trade Test Transmissions began way back in 1963. Since then I have collected photographs of BBC test cards and identification symbols plus recordings of virtually every piece of BBC test card music. But why only BBC material? Why didn't I take any notice at all of the commercial stations? One reason is that while at junior school we all had to produce a project on any topic which was of personal interest. I chose the subject of radio and television. I wrote off to the BBC and some commercial stations for information but only the BBC could be bothered to reply. From then on I have stuck with the BBC and totally disregarded the others! Incidentally, I still have the project book at home, complete with all the original BBC information.

I first became aware of the BBC test card and the excellent accompanying music one lunchtime. After watching the five-minute news headlines which in those days began at 1.35pm on weekdays, and "Watch With Mother" (I'm not sure whether it was Picture Book, Andy Pandey, Bill and Ben, Rag Tag and Bobtail or The Woodentops) the continuity announcer said something to the effect that "the next programme will be for children at 5.05pm. Until then we are closing down." Being inquisitive I wondered what happened between 1.45pm and 5.05pm, so I remained sitting there in front of the RGD television set and waited to see what transpired.

After the clock had pulsed round to 1.45pm the screen went blank for a short time but then suddenly a strange pattern appeared together with a tone. The pattern consisted of a broad black cross on a white background. Unbeknown to me at that time, this pattern was the "art bars" which was BBC shorthand for "artificial bars" - the first electronically generated test pattern. The "art bars" pattern wasn't always radiated after "Watch With Mother". More often (from late 1963 onwards) it was a sawtooth pattern.

Still intent on finding out what happened until 5.05pm I remained glued to the set. Shortly before 2.00pm the test tone and "art bars" disappeared and I thought that was the end of that! However, at 2.00pm the world-famous Test Card C appeared together with some excellent music which was occasionally interspersed with the identification signal which consisted of two Bs and one 'C' played on something resembling a piano (but not quite!). Incidentally, prior to 1962, the same Ident Signal was also played on a church organ and I gather that a flute was used on classical tapes. One of the first pieces of classical music which I can remember was Chopin's "Polonaise in A Flat" played by the Alfredo Antonini Orchestra. Does anyone else remember this?

Brief Test Card History

Test Card C was used from January 1948 (according to extensive research which I have done) until April 19th, 1964. During that period a lot of excellent music was used, most of which wasn't commercially available. When BBC-2 officially started on April 20th, 1964, Test Card C was replaced by Test Card D; Test Card E was used for a relatively short time on BBC-2. Test Card D was used until November 1969 when colour came to BBC-1. Test Card F (used on BBC-2 from the summer of 1967 prior to the official start of Europe's first national colour TV service on December 2nd) officially replaced Test Card D on November 15th 1969. Test Card D gained the dots either side of the designation letter D on December 2nd 1967 (despite official information to the contrary which implies a later date). The digitally generated version of Test Card F was introduced in May 1984, initially without any station identification. You will probably have noticed that the word "official" is used here quite a lot. That's because I always try to give the exact date when a test card was replaced or introduced but occasionally a test card may have been used for a trial period prior to the "official" (there's that word again!) inauguration.

Back to the Sixties

Returning to the early Sixties, BBC Trade Test Transmissions didn't begin until 10.00am (the starting time was later changed to 9.00am). In those days, half-hour tapes of recorded music were used but because the test tone was radiated punctually (well, usually) at 25 minutes past and five minutes to the hour, trying to hear or record the last five minutes or so of each tape was rather difficult. However, there were four main ways of hearing the tapes all the way through. The most reliable was when coverage of a cricket match was abandoned due to rain or bad light. On those occasions a caption was transmitted explaining the situation together with test card music. Because this wasn't a Trade Test Transmission (but part of a scheduled programme), the tone wasn't used and tapes were normally played in their entirety. Another good method of listening to the end of test card tapes was during BBC Interludes which could last for half an hour or more.

Another method usually presented itself between 12.30pm and 1.00pm. Provided there weren't any programmes for Welsh viewers there was a curious

tradition whereby music was played until 1.00pm (instead of 12.55pm) and then the test card (and any remaining music) was faded out to leave a blank raster and tone until 1.15pm when Trade Test Transmissions would resume until the lunchtime news which began on weekdays at 1.25pm. Occasionally the time between 1.15pm and 1.22pm would be filled by the test card as usual but the end pieces of a tape would be timed to finish bang on cue for the two-minute station opening sequence (Globe symbol and specially composed guitar music from Freddie Phillips of Camberwick Green fame!) which started at 1.23pm.

The fourth method of hearing most of the music contained on the half-hour tapes was less reliable than those already mentioned. Occasionally (and it was only occasionally) on Saturday mornings at 10.50am, the test card would be replaced by a photograph which I am sure was a view showing the back of Television Centre. Superimposed across the familiar-looking rounded building was "BBC-tv Trade Test Transmission" in white lettering. This photograph tended to remain on the screen until almost 11.00am and the tone wasn't radiated, so giving enthusiasts some extended music. Does anyone else remember this photograph? I have no idea why it was only used on some Saturdays and only for approximately nine minutes from 10.50am - it was never shown at any other time as far as I know.

The only other occasions when the test card music was extended occurred if the engineer in charge of the tape machines was in a good mood. This phenomenon didn't seem to happen too often for some strange reason!

In 1966, experimental stereo TV sound test transmissions took place at about 8.30am. To get the stereo effect you had to position yourself mid-way between the television receiver and the radio which was tuned in to the Third Programme (or, for younger readers, Radio 3). Ideally, the speakers had to be at least six feet apart. Unfortunately none of the music used for these stereo test transmissions was used as test card music so there was no chance of recording Trade Test music in hi-fi stereo!

Well, that seems to cover my earliest memories of BBC test cards and music. I hope readers will have found it interesting as I have tried to include details which have so far not been featured in any other articles about test cards. There is certainly quite a lot of interest in this rather specialised subject. Following appearances on "Open Air", "Midlands Today" and "Breakfast Time" I have now come across about forty other enthusiasts, but there must be more somewhere! As far as I can tell, I am the only one who has had a more-than-keen interest in both the accompanying music played *and* the test cards and identification symbols used from the early 1960s right up until May 1983 when regular BBC Trade Test Transmissions were discontinued in favour of sample Ceefax pages.

For those interested in this fascinating subject, further articles about BBC test cards, music and identification symbols have appeared in the following journals:

Television, May 1978

Television & Home Video, January 1981

Television, January 1984

TeleRadio News - various issues.

If there is sufficient interest shown by readers of **405 Alive** to this particular article please write in and let me know, it may spur me on to write something about BBC Globe and Clock symbols.

Help Wanted

If anyone has photographs or videos of early BBC test cards and/or identification captions, please get in touch. Also, if anyone has recordings of BEG test card music and/or play lists I would certainly like to hear from them. Please send any information to Keith Hamer, 7 Epping Close, Derby DE3 4HR (tel: 0332-513399). I am particularly interested in tracking down a photograph for better still, a video) of the BBC-tv Schools tuning signal used from 1963 which consisted of a circular greyscale "pie chart" with a 1MHz frequency segment. The accompanying music was played on the flute and cello but, surprisingly, it was never given a name whereas the seven guitar pieces used with the Globe symbol had titles such as Bossanova, Blue Part Invention and March of the Pelicans.

FEEDBACK

The Oxo colour experiment (from a telephone interview with Eric Ainley):

Eric, now retired, was one of the team involved with the "Oxo" colour experiment in 1956 (see issue 1, page 15 and issue 2, page 34). He recalls it was a bit of a gimmick really but it managed to get a lot of publicity for ITV and, to a lesser extent, the advertised product (Oxo). It was made on film and projected on an EMI telecine machine in the basement of ATV's studios at Britalian House, London (17/19 Foley Street, corner of Ogle Street). The commercial was made in black and white but the precise arrangement of the frames caused a kind of flicker effect, which with the persistence of vision, led some viewers to think they saw "real" colours. If you squint and blink at a very bright white incandescent lamp bulb, you can simulate the same effect.

Incidentally, Eric says when he first got a TV set in Blackpool at the end of the 1940s, he used to watch Sutton Coldfield on channel 4 (although well out of the official service area). A masthead preamplifier (valve, of course!) was fed by a cable leading out of the attic. In those days the 441 line transmitter in Paris was occasionally received during summer, sometimes swamping the S.C. transmissions. The receiver locked up to the 441 line signal without difficulty, and this "interference" continued even the receiver was retuned to the new Holme Moss transmitter on channel 2.

Car ignition interference was a problem when watching weak signals, but petrol shortages and the lower number of cars on the road, particularly during winter, meant that this was not a major problem.

Eric also mentioned that ATV later had a microwave feed from Birmingham to London so that advertisers could see their commercials being played out on Midlands ITV. A feed was apparently also taken to Sir Lew Grade's suite at the Dorchester Hotel, and Eric believes that Sidney Bernstein (Granada's chairman) had a similar arrangement for watching Granada TV at his London home.

From Keith Rann, Loughton, Essex:

Issue 2, page 25. Test Card D was used from January 1964. The date for

Test card E is correct. [But see below!]

From Keith Hamer, Derby:

Test Card D was used on BBC-1 from April 20th, 1964 until November 1969.

The final days of 405: For several weeks prior to the closure of the 405-line service, the picture quality from the channel B4 Sutton Coldfield transmitter was extremely poor and suffered from an annoying hum-bar. As I wanted to record the last few programmes on 405 lines I telephoned the engineers at the transmitter and also at Pebble Mill. They obliged by rectifying the fault just in time. They were, at my suggestion, hoping to radiate Test Card C at closedown on January 2nd/3rd 1985 but, in the end, Television Centre took care of the brief ceremony - not by showing Test Card C but, instead, a 1938 Baird T18 receiver. Although that was the "official" closedown, the channel B2 transmitter at Holme Moss continued with 405 lines the following day until about 4.20pm when transmissions suddenly ceased during children's programmes.

Page 34: The BBC-1 identification in traditional small white sloping squares on Test Card D was not in black lettering but was, in fact, of exactly the same grey as the overall background. This was also true of Test Card E, and, of course, Test Card F. The identifications 405 LINES, Reduced Power, and 625 LINES were in white. The modified Test Card C, used on BBC-2 in the mid-sixties had black boxes and 625 LINES also in black. BBC-2 also radiated Test Card C prior to April 20th, 1964 during field trials with the identification BBC in standard black with the normal white designation letter C around the second B. Just above BBC appeared in black, 625 LINES and below (also in black), CHANNEL 33. Both versions of Test Card C used by BBC-2 in the early/mid-sixties also included details of the central frequency bars (1.5, 2.5, 3.75, 4.5, 5.25) in "Mc/s" (all numbers and lettering in black).

The famous rotating Globe symbol was first used on BBC-tv in 1963. The mechanical globe was surrounded by a thick black circle on a large white square. The square itself was positioned on a light grey background. The identification BBC (not "BBC-tv") appeared in standard white sloping boxes in the lower right-hand side of the symbol. The globe and clock were changed on April 20th 1964 when BBC-2 began. The new BBC-1 symbol was known by some within the BBC as the "watch strap" globe as the rotating symbol appeared on a broad horizontal white band with a dark grey band at the top and bottom. The identification was "BBC 1" in sloping white boxes. The globe used from 1969 (with the introduction of colour on November 15th) featuring the curved mirror still exists, but it is definitely not for sale! The digitally-generated globe symbol, was introduced at 7.00pm on February 18th, 1985.

Preparations are currently being made to change the BBC-2 identification symbol and plans are afoot to renew the traditional BBC-1 globe!

** OK, who is right on Test Card D? Obviously not BBC Engineering Information Dept who have the wrong date! I suspect Keith Hamer is right - I don't think anyone has done more research into the subject than him ...*

Please do let us know of any more errors you spot, we don't wish to propagate wrong information if at all possible!

BAIRD STILL-PICTURE TRANSMITTER

In our April issue we gave a description of the DuMont Phasmajector and it was stated that this class of still-picture projector was the first of its kind. We learn, however, that as far back as August, 1936, the Baird Laboratories produced equipment that was essentially similar in character and of which the following is a description.

THE Baird still-picture apparatus was designed primarily for the production of television signals for testing both cathode-ray tubes and television receiver performance without in any way being dependent on an outside transmitter for the signals. To carry this into effect, the vision signal itself is produced through the medium of a special type of tube which to all intents and purposes is a modified form of cathode-ray tube as illustrated in one of the accompanying photographs.

The tube is of the hard type but in place of the usual screen of fluorescent powder at the end of the belled out tube section, there is mounted a nickel plate $3\frac{1}{2}$ in. diameter on which is "printed" a picture $2\frac{1}{2}$ in. by 2 in. so as to give the standard B.B.C. picture ratio of 5:4. The picture is a positive one, being made from a half tone block so that both half tones as well as black and white effects can be included in the picture. As will be seen from the photograph, the picture itself comprises the head

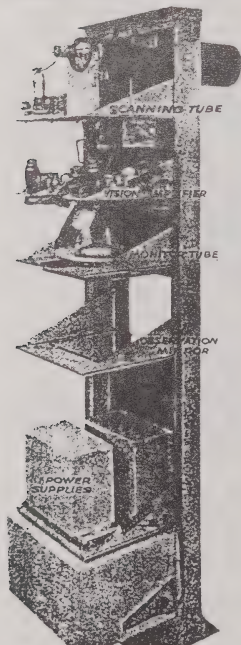
More electrons are released by the metallic portions than by the composition, and this varying secondary electron emission constitutes the picture signal, being picked up by a collector anode formed by metallising the inside wall of the tube.

A potential difference of 100 volts applied between the collector anode and the plate itself is found sufficient for this purpose, and the accompanying diagram gives in simple schematic form the main connections of the transmitter itself. The whole equipment is housed in two racks, one of which is shown in the accompanying illustration.

The tube complete with the standard form of Baird magnetic focusing is mounted in the top section of the rack together with a two-stage vision amplifier, the output from which constitutes the vision signal proper. Below this is accommodated a standard 12 in. Baird "Cathovisor" cathode-ray tube together with its associated time base generator, etc. This acts as a monitor tube, and, being mounted vertically, the picture built up on the screen of the tube can be viewed in a mirror mounted horizontally approximately 1 ft. from the tube face. With an



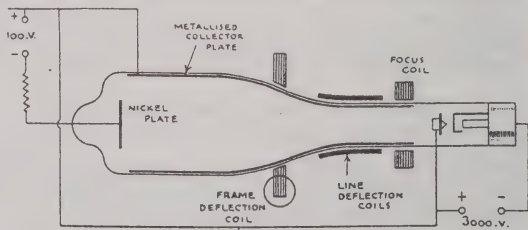
Photograph of Baird tube employed for producing still-picture signals.



The Baird still-picture transmitter.

and shoulders of a woman with a check blouse on, together with lettering and special test signals for checking the linearity of scan in a receiver.

This particular tube is 24 in. long with a 4 in. diameter bulb and functions on the principle of varying secondary emission. That is to say, when the cathode-ray beam produced by the normal electrode assembly



Schematic diagram of the Baird still-picture transmitting tube.

common to all Baird "Cathovisor" tubes is made to scan the picture on the plate, varying numbers of secondary electrons are released according to whether the beam is traversing the metallic portion of the plate or the special composition which fills the interstices of the metal.

arrangement of this character it is an extremely easy matter to watch the monitor picture while making any adjustments on the rack controls.

The necessary power supplies for this equipment are seen at the base of the rack and are quite standard.

(Continued at foot of page 341)

"THE BAIRD STILL-PICTURE TRANSMITTER"

(Continued from page 324)

The second rack is built to house the frame and line synchronising pulse generators, these pulses being fed to the time base generators of the picture tube, and the cathode-ray tube monitor.

In the Baird factory the signal is made to modulate a transmitter fed with 405-line interlaced synchronising pulses and in this way make up a convenient and most efficient test signal for judging receiver performance.

Apart from a normal picture signal, the apparatus will also provide the usual type of black cross and, when desired for lecture purposes, the principles of television can quite easily be demonstrated.

It should be emphasised that this apparatus has now been in constant use for a period of nearly two years and has given no trouble and, bearing in mind the priority of date when compared with the DuMont equipment, it was felt that readers would be interested in this brief description, together with the accompanying illustrations.

This, as far as I can ascertain is the original monoscope camera and it was a Baird development. Most people think of RCA when they think of monoscopes, but in their first paper on the subject (*RCA Review*, 1938, 2, p.414) a British patent number is acknowledged (no. 465715) without saying whose it was. The principle is also discussed in a German periodical (*Zeitschrift fuer Technische Physik*, 1935, 16, p.467) so I would not like to determine who had the idea first.

The lady in the picture is Madelein Carroll 'wearing that famous blouse' - thanks to Ray Herbert for this information.

PRACTICAL TELEVISION

May, 1959

Still-picture Transmitter

By H. J. Barton Chapple, B.Sc.

MONOSCOPE equipment is used quite extensively by both the BBC and Independent Television Companies, to provide test card pictures for the benefit of the industry and the trade in checking receiver performance. This special apparatus is primarily a post-war development, but it is interesting to note that equipment was designed prior to the war for testing sets without in any way being dependent on an external transmitter for the signals. The vision signal itself was produced through the medium of a special type of tube which to all intents and purposes was a modified form of cathode ray tube. In place of the usual fluorescent screen was mounted a nickel plate on which was "printed" a picture. The picture, a positive one, was made from a half tone block, similar to those used in these pages, so that both half tones as well as black and white effects would be included in the picture.

Function of Tube

The tube functioned on the principle of varying secondary emission. When the electron beam produced by the normal electrode assembly scanned the picture on the plate, varying numbers of secondary electrons were released according to whether the beam was traversing the metallic portion of the plate or the special composition filling the interstices of the metal. More electrons are released by the metallic portions than by the composition, and this varying secondary electron

emission constituted the picture signal, being picked up by a collector anode formed by metalising the inside wall of the tube.

Equipment Housed in Two Racks

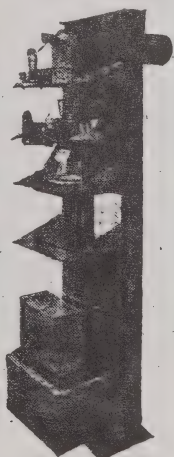
The whole equipment was housed in two racks. The picture tube, magnetically focused, was mounted in the top section together with a two-stage vision amplifier, the output from which constituted the vision signal proper. Below this was the monitor tube, mounted vertically, the picture being viewed in a horizontal mirror.

The necessary power supplies were at the base of the rack while the second rack housed the frame and line synchronising pulse generators of the picture tube and the cathode ray tube monitor. The signal output could be made to modulate a standard carrier fed round the factory and so provide a convenient and efficient test signal.



(Above).—The picture tube.

(Right) The rack mounting for the equipment.



TELEVISION SIGNALS ACROSS THE ATLANTIC

By H. O. PETERSON and D. R. GODDARD
(Research Engineers R.C.A. Communications, Inc.)

*An exclusive account of some R.C.A. experiments in picking up the
B.B.C. Signals in New York.*

ON January 21, 1937, one of the engineers at the Frequency Measuring Laboratory of the Radio Corporation of America at Riverhead, N.Y., was making his usual routine "cruise of the ether" in the neighbourhood of 40 megacycles when to his surprise he heard a carrier modulated with a voice having a distinct English accent. A hurried check of the frequency showed the carrier to have a frequency of 41.5 megacycles per second, the assigned frequency of the voice channel of the Alexandra Palace television transmitter.

This was the start of a series of observations and measurements on the English and German television transmissions. Fig. 1 shows the ultra-short wave receiver used. The lower panel of the further rack is the

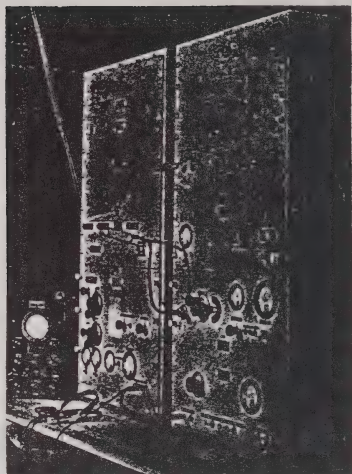


Fig. 1.—The receiver used in New York for picking up the Alexandra Palace signals.

controlled double-pole double-throw switches were installed and connected as shown through transposed transmission lines to a third similar switch located near the centre of the antenna. From this third switch a transmission line was run to the receiver, shown in Fig. 1. The object of this array of switches was to provide means whereby the receiver could be connected to either end of the antenna and a damping network connected to the other end. This provided a directive antenna directed towards London or, at the snap of a switch located at the receiver, a directive antenna aimed 180° away from London.

From January 21 to April 4, the voice channel from London was heard 45 times whilst the video channel was heard 15 times. Usually the signals were rather weak, but at times both the audio and video channels became quite strong. The maximum field strength observed was about 70 microvolts per metre for both channels. As the rhombic antenna used had an effective height of about seven metres, the signal strength at the terminals of the receiver approached 500 microvolts.

German Transmissions

The German and French television transmissions were heard on several occasions but in general these signals were not as strong as the English transmissions and were heard less consistently. There was also reason to believe that the Italian television voice channel was received although positive identification was not established.

The English signals were picked up a few times at the R.C.A. receiving station near Chicago. The signal strength at this point was considerably weaker than at Riverhead (near New York City). Also the

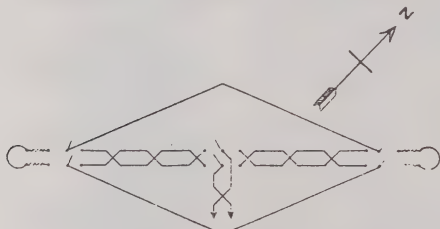


Fig. 2.—Diagram of horizontal rhombic antenna for receiving Alexandra Palace on 41.5 mc.

receiver proper while just above it is a low capacity antenna switch used to connect the receiver to either the incoming transmission line or to a calibrated ultra high-frequency signal generator contained in the rack in the foreground. The bottom panel of this rack is a peak voltmeter useful in comparing peak signal values and determining signal-to-noise ratios. The upper panels of the two racks contain the rectifying equipment and voltage regulators necessary to obtain stable receiver operation at these frequencies.

Fig. 2 shows the horizontal rhombic antenna designed to receive London on 41.5 mc. At the two extremities of the antenna special low-capacity remotely

signal often was not audible at Chicago when River-head would have a good signal.

Unfortunately, during the period of maximum signal strengths, there was no television receiver available on which to observe the video signal capacity. When such a receiver was procured the period of strong signals had passed and there was not sufficient signal voltage to permit proper kinescope synchronisation. However, judging from the fact that at times the received video signal reached a value of well over 400 microvolts, it would be reasonable to assume that a useful picture could have been obtained. The audio signal frequently was of sufficient strength to give excellent loud-speaker reproduction.

These two channels were, of course, subject to fading. This fading was of quite a different nature on each. The 41.5 megacycle signal usually experienced rather rapid deep dips in intensity, in fact, it seldom maintained a fixed value for more than a few seconds at a time, while the 45 megacycle channel changed its level slowly, frequently remaining almost constant for a minute or more. Rarely was the fading of a selective nature on the audio channel. The audible response of the video

channel was of such a nature as to make it difficult to state whether or not selective fading was present.

One case of interference from another station was noted. This signal came from a ship off the coast of Scotland working the shore with their standard ship telegraph transmitter operating on 8.3 megacycles. It was the fifth harmonic of the transmitter that caused the interference.

Is Transatlantic Television Possible?

The reader now probably wonders if this is the start of regular trans-oceanic television. In the opinion of the authors this phase of television is still distant. The trans-oceanic reception of frequencies of 40 to 45 megacycles may be explained as being due to exceptionally high ionisation of the F_2 region of the Kennelly-Heaviside layer. This in turn is in phase with the great increase in sunspot activity as the maximum of the eleven-year sunspot cycle is approached. With this in mind it is reasonable to assume that for the next few years, there will be sporadic reception of ultra-high frequencies over great distances.

Old advertisement courtesy of Bill Journeaux - many more to come in future issues!

G.E.C. TELEVISION

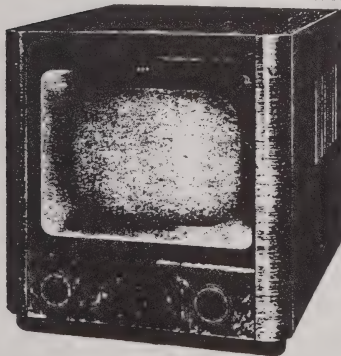
12" Television Console with *G.E.C.* aluminised flat screen CRT for wide angle viewing

High fidelity sound
output. Picture size
10½ in. x 7½ in. Walnut
veneer cabinet.

BT 4542

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405 ALIVE

The Newsletter of the 405 Line Group.

ISSUE 4, December 1989.

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EDITORIAL

The fourth issue and over 100 subscribers already! Have we already reached this milestone? Or is it a millstone (round my neck)? No, not really. Anyway, thank you for your support, all 101 of you: it really is appreciated. In fact your support comes up for renewal with this issue and deeper inside you will find a little rubric on the subject. I hope you will wish to stay with us - if not, you should be telling me why not, so I can improve or alter the content of the newsletter.

Now I have some good news and some bad news, but let's have the good news first.

From issue 5 405 Alive will be expanded to 48 pages each issue and the next number will appear earlier, in January. Even better, as long as stocks hold out, everyone will get a free gift! Yes thanks to Philips you will receive a copy of **Television the first Fifty Years** by Keith Geddes and Gordon Bussey. The normal price of this 32-page colour booklet is £2.25 and if you aren't already familiar with it, you will be pleased to add this to your library. [*Copies are still available in return for an A4 size self-addressed envelope stamped 50p.*]

OK, the bad news. We have been so successful that we must have a price rise! You will at least get more pages and I hope you will still think 405 Alive good value for money compared with other similar enthusiast publications. But why is it necessary?

Easy - the printing costs have risen. These have been subsidised up to now as I was producing the newsletter - with permission - on my employers' photocopier. All I had to pay was the cost of the paper, which was fine to begin with but now with over 100 copies to print and 40-plus pages each, this is no longer viable on an office copier. Other people are queuing up to use the machine and the process now just takes too long. So I have had to go to an outside printer and not surprisingly, the cost is a lot more.

Also, to simplify administration, I have decided to provide the envelopes and stamps, which will save you (but not me!) time and effort. Because of this, your subscription will be £8 for the next year. This seems a big jump from the previous level but don't forget you previously had to pay for stamps and envelopes and won't from now on. I'm sorry but it's the only way, and you may rest assured that 405 Alive is run on a totally non profit-making basis. I hope I can maintain this subscription level for the following year as well.

Back to this issue in which you will see many articles contributed by you, the readers. This is excellent: there is a wide spread of content and we are all most grateful to those of you who made the effort to contribute some words. Let's have lots more of this please, it makes editing a newsletter so much more worthwhile.

Now, here is something that I need to tell you, or at least I think I do, under the terms of the Data Protection Act. Your name, address and phone number (but nothing else) are held on a computer record: there is absolutely nothing sinister in this and I only do it this way because it is the only easy way I can keep up with the organisation and also provide people with a list of other 405ers. But if you object, then tell me and you will have the unexpired part of your subscription refunded. End of public service announcement.

Oh yes, an apology now. The illustrations in the last issue were over-dark and I'm sorry. Unfortunately the machine in the place where I get the pages copied has its good days and its bad ones, depending on when the man from Rank Xerox last came to service it. I have asked them to try and do better next time, although as we are changing printers it's pretty irrelevant!

Andy Emmerson.

LETTERS, WE GET LETTERS ...

From Peter Delaney, Wargrave:

Many thanks for 405 Alive; I enjoyed reading it all, even the parts that are not of particular interest. Nostalgia has that effect!

I would not have considered myself a test card enthusiast but have found the pieces on cards and music of interest. Some tapes seemed to "appear" rather less often than others, so I am intrigued that it was possible to predict which tape was likely to come on later (page 18). My memory is of largely watching BBC in the late 50s or early 60s, but the local ITV company (Southern, where I lived then) had, to me, a captivating film shown before the published programme start time. The music began with the Chillerton Down channel 11 ident card, and at a particular point a film showed various scenes of the Southern area - yachts in the Solent, English Channel cliffs, the Needles, Brighton Pavilion, and so on until service began.

Memory is not always reliable for "historical" fact, but I think the film was changed twice - once when the Southern territory was extended to include the Dover transmitter area, and later when a colour version was produced. Did any other programme contractor produce a similar film? *Yes, several did.* [AE] I never saw any, but to this day I can see parts of the Southern one in my mind as the tune runs through my head! I doubt if anyone has a copy of it [*oh yes they have!*] - pre-video tape and all that - but if so, I'd love to see it again. [*Peter has done now*]. At its end the Southern Star symbol "grew"; the symbol was to be seen at various places in Southern's studio centre in Southampton at the time (the old Plaza cinema). Happy days!

**From Robin Howells,
Kidderminster:**

Just writing to say how good your newsletter is especially the adverts section, where I've bought a few 405

line sets and other things. I'm sure that many readers will disagree, as I do, with your comment in the September editorial that collecting old TVs is a cheap hobby. I agree that you can get cheap sets but you've got to pay a lot for the really old ones. I hope your newsletter continues for a long time to come.

From David Boynes, Winlaton:

How about a Receiver Profile feature in 405 Alive? I have twenty 405 line TVs in my collection, ranging from 1936 to the mid '50s. I am currently restoring a 1946 Marconi 10" receiver: this set is similar to the 1939 model 712. The post war version has different valves in the receiver section, Z66s instead of KT241s; the timebase is almost the same save for a few circuit economies. The set should be working shortly, assuming the EHT transformer and the tube are OK.

The next restoration project is a 1938 Pye television-radiogram combination. I am waiting for the mains transformer to be returned as this was burnt out and required rewinding.

From Stephen Maitland, Kinghorn:

Ref: issue 3 editorial. It's you who's to blame for bakelite TVs becoming highly desirable! How? By generating interest through 405 Alive and giving the signal to about 100 enthusiasts to enquire in the "trade" about such things in a relatively short space of time, which is inevitably going to lead to a price spirals there won't be that many sets on the market at a given time to meet demand. This will go on until everyone has got their set, the price will then stabilise and perhaps come down slightly!

Proof? Until you started **405 Alive** I used to see TV22s at antique fairs that didn't sell! Now they go like hot cakes. I think the same

happened with telephones. Now that everyone has had time to acquire the telephones they want, prices have stabilised and have come down (on some)!

I think, though, that this is all inevitable and a good thing. As soon as something becomes "valuable" it is saved from the scrapheap. I'd much rather see things with "high" prices on them than destroyed and lost for ever. It has got to be worthwhile for someone with no interest to make the effort to sell. And it benefits the collector, as it brings out more interesting items onto the market.

From Charles Brown, Hanley:

I was wondering how many of your readers can remember when they were watching their TV sets and as they watched, a neighbour perhaps drove his car outside and left it running (while he went indoors for some reason) causing interference lines to appear on the screen running up and down just when the programme came to a good part. The viewer felt like going outside and throttling whoever it was! I enclose a cutting from a 1954 magazine [elsewhere in this issue] called **Wireless and Electrical Trader** that I thought your readers might be interested in.

From Bill Journeaux, Poole:

I must apologise for not having written to you before to congratulate you on the 405 Alive newsletter. I am amazed not only by the quality but also by the quantity of your publication. [Short pause while editor goes red in the face with embarrassment...]

We held another meeting at Portishead last week with our usual 405 line display and I am enclosing a short report of this meeting, together with the date of the next one. [That's what people want!]

IN THE NEXT ISSUE ...

The Prisoner episode that was never transmitted ... ITV technical topics ... 1968 - year of change ... Colour TV memories ... and much more.

SOFTWARE NEWS

On the next two pages you will find a new feature from Steve James on recordings you might wish to buy. I think you'll like it but please let us have your comments on this feature - was it good, would you like to give your own opinions, have we missed some goodies? Do write in!

We are also starting a small section where you can put a request for programmes you have missed.

In the meantime, some brief mentions of other new releases and re-releases ...

Video tape:

THUNDERBIRDS VOLUME 11 - THE IMPOSTERS; THE MAN FROM MI5
(Channel 5 Video, £7.99)

Yet another of Channel 5's many re-releases which will please fans of Gerry Anderson's supermarionation series for kids of all ages. Either you like these things or you don't, so the converted will need no persuading. Non-believers like myself might be swayed by the fact that this one contains several original TV commercials from the 1960s for Lyons Maid ice cream. At least they say these are TV commercials, although they are in colour (perhaps all Gerry Anderson productions were made in videcolor in those days). They come complete with the telecine lead-in used by ABC-TV in those days and are just great. I loved the one in which the Post Office Tower is saved by launching an ice lolly!

Audio tapes:

ORIGINAL TV HITS OF THE SIXTIES (Moment C105, £4.49)

This compilation is sub-titled Collectors' Edition which is usually a warning that you are about to be conned. Well, these are cover versions, not the originals but they come over quite well, and you'll probably like the picture of a Bush TV 22 on the sleeve. You get 11 tracks for your money, viz. Route 66, Dr Kildare, The Human Jungle, The Saint, Danger Man, The Man from UNCLE, The Avengers, The Baron, Thunderbirds, Dept. S and The Prisoner. Harmless enjoyment.

TV TUNES (K-Tel CE2429, £6.99)

50 of TV's greatest themes it says on the sleeve and this one is first-class. Most of the tunes are from the 1960s and 70s with a few from the 80s, and they appear to be the originals. The album is derived from four other ones,

Television's Greatest Hits volumes I-III and Australian TV's Greatest Hits, which are also available on the Screen Records label. The present album cuts out a lot of the obscure American and Australian series you have never heard of and concentrates on (mainly American) ones you do remember. Recommended.

TV's GOLDEN HITS by Frank Chacksfield & Orchestra (Compleat 671020-4), £1.85

This is an American import (originally on the Decca label) which you may find in Virgin Records shops at this bargain price. The album contains competent but so-so versions of ten USA series of the 1960s. At £1.85 it is (just) worth buying for harmless background noise when you're reading **405 Alive** or whatever.

NB: the foregoing reviews are of cassette tapes. CD and LP record versions are probably available too, but I'm not sure. [Andy Emmerson]

PROGRAMMES WANTED

If you have recordings you are prepared to lend, please contact the person named direct. **405 Alive** will NOT become involved in any dealings resulting from this section.

* Films: THE DAMNED (GB, 1961), released in USA in 1963 as THESE ARE THE DAMNED. LET'S KILL UNCLE (USA, 1966). Philip Howard, c/o Garnet Langton, P.O. Box 4, Bourmemouth, Hants., BH1 2HY.

From Wireless & Electrical Trader
6.11.54 - see letter from Charles Brown earlier.

COMMONS DISCUSS TV SUPPRESSORS

In reply to several questions on the subject of television interference caused by motor vehicles, Mr. David Gammans, the Assistant Postmaster-General, said that in regard to issuing a regulation making the fitting of a suppressor compulsory, it was useless unless it could be enforced.

"It is comparatively easy to enforce the regulation about silencers because one can hear if there is not a silencer. The proposal to make the fitting of suppressors compulsory would entail recruiting a corps of inspectors to go round looking at every motor car, and we do not believe that it is desirable or necessary, in view of the success which the present campaign is having."

He said that although he could not give any figures showing the proportion of suppressed to unsuppressed vehicles, there was still a steady demand for suppressors to be fitted to older cars, possibly as a result of the appeals that were continually being made.

PICTURE PAGE

Video Reviews by Steve James

Standing in the City Centre "Music Megastore" in the midst of a seething Saturday afternoon crush, dazzled by pop videos from flashing screens and pinned to the spot by throbbing chart music is not perhaps the best time to select the best vintage videos to rush home to the old TV22! Never fear lads, for I alone shall volunteer to scour the shelves to find the best archive offerings.

In this issue I have chosen three widely available videos, and looked at each, paying particular attention for value for money, entertainment, and authenticity. The latter of course, will be more important to us, who will want to display programmes on our sets as near to being "as originally shown" as possible. Now read on...

WATCH WITH MOTHER - THE NEXT GENERATION. BBC V4280, £7.99.

This tape follows in the footsteps of last years incredibly successful original Watch with Mother compilation. This time, however, the programmes span the years 1964 to 1973 and so of course will appeal to a different generation of grown up children. If this tape's predecessor was anything to go by, these "grown up children" will show it to their offspring in favour of todays horrible American space-zapping tripe. The tape runs for 70 minutes, and include five programmes as follows; Tales of the Riverbank, Pogles Wood, The Herbs, Mary Mungo & Midge, and Barnaby the Bear. Actual transmission dates are included on the packaging and the programmes are shown chronologically.

Picture quality is very good. The only complaint is that the BBC have seen fit to superimpose the actual title of each story in horribly shimmery computer generated writing over the opening frames. This wasn't necessary originally, so why do it now? The programmes were made with an interesting variety of processes including live action, stop frame models and standard drawn cartoons. The Herbs, Mary Mungo & Midge, and Barnaby are in colour I'm afraid. It is still very early colour though - hands up who's running a Thorn 2000 series!!

VERDICT: This cassette's appeal will probably be dependent entirely on your age.

THE PRISONER - EPISODES 1 & 2. CHANNEL 5 VIDEO, CFV04742, £9.99.

This is the first in a series of tapes from Channel 5 which contain all 17 episodes is this classic sixties thriller. For those who don't know, the story revolves around a newly resigned top-brass Government official, played by Patrick McGoochan (he of Danger Man). Just as he is packing for a well earned holiday, he is rendered unconscious by a cloud of anaesthetic gas, and whisked off to the isolation of The Village. This is a place where men and women have no names, only numbers four hero is Number 6), the signboards and roads lead to nowhere, and you can travel by taxi to any location you want, as long as it's in The Village. It's a sort of Swiss-styled Milton Keynes with Mini Mokes.

Each episode has the inquisitor, an ever-changing "No. 2" (watch out for

Leo McKern and Paul Eddington) trying more and more devious ways to get No. 6 to tell them why he resigned, which of course he doesn't, despite coming pretty nail-bitingly close.

The programmes vary from edge-of-settee situations to very surreal and over-complex pieces. The series was made in 1967, and it seems that some of the feeling of that particular year does come across. The series was made in colour, presumably for export, as at the time in this country of course, only BBC-2 was just starting to make headway with colour transmissions.

Picture quality is rather variable, although this is not so significant, as the programmes themselves are all of a very high quality. It seems to be the sort of series that everyone wishes was still around today in some modern equivalent, basically something really exciting that has you biting the cushions as you have to wait a whole week for the next episode.

VERDICT: Arguably superior to *The Man from Uncle*, *The Champions* and other similar action series, but how about Channel 5 releasing those too?

THE MONKEES VOLUME 2. RCA COLUMBIA VIDEO, CVT11083, £9.99.

"They sing, they play, and they're more fun than a barrel of Hey Hey it's The Monkees" runs the blurb on the back of the packaging, giving you some idea of what we are up against with this one. They may have sung, but did they play? Anyway, this is the second of four volumes of Monkees episodes from RCA Columbia, each containing two episodes, in turn containing two songs.

The first programme is called "Dance, Monkees, Dance" and date from 19&6 when they were really at the peak of their success. The jokes and script in general really are very corny, but of course the real purpose of these shows was to give an airing to a couple of new songs, and pad out the rest of the show with some kind of story. The songs are actually quite good, thanks mainly to the songwriting team of Goffin & King, who also wrote big hits for other contemporary stars in the early 1960s.

The second programme dates from 1968, and loses the studio audience, but gains afro haircuts and kaftans. Whilst the demise of the audience may at first seem a good thing, it does tend to leave you wondering where to laugh. Also, this programme is almost all filmed out of doors, whereas the previous one was very much studio-bound. The last song in the show "Star Collector" is very period, with dry ice, light boxes and CND symbols etc etc.

Technical quality is very good, despite the slightly odd colour, and the sound track appears to be have re-mastered to high fidelity mono.

VERDICT: Harmless fun and quite good tunes. Presentation is completely as original.

¶ That's it for this issue. All the above tapes date from the 1960s, so to balance things out a little, I hope to be looking at tapes of older material next time. For instance, there are now several tapes of British Movietone News which may be worth a look, and some vintage sporting material has also appeared.

If you look around carefully, there are plenty of tapes around that would look great if replayed on 405-line equipment. What about some of those great British comedies of the fifties with the likes of Alistair Sim and Terry Thomas?

TECHNICAL NEWS

One of the nice things about our circle is that we span a wide variety of interests, from the artistic (programming, graphics and music) to the deeply technical. Nobody can be an expert in all these fields but at least we can have our own specialities and I hope no-one feels intimidated or alienated if there are a few parts of this newsletter that are double-dutch to them.

That said, I make no apology for some deep-tech stuff now! We get several requests for a simple electronic device to convert 625 line recordings to 405 lines, mainly from people who innocently don't realise what they are asking! In the past, this process needed several hundredweights of electronics; nowadays you can get the necessary apparatus into a space the size of a suitcase. It is still hi-tech stuff and would cost about £300 or £400 to construct, but at least it is now an attainable project for a keen technician.

One of our group has built his own standards converter and it really does function extremely well. He has agreed to design printed circuit boards so others can make their own converter, which is marvellous news. I won't print any more details until he is ready to announce the news but I hope we shall have something to say in about two issues' time. This is good stuff! *[and is taking a little longer than anticipated to achieve. Please be patient, it will be worth waiting for.]*

Another device on many enthusiasts' wish list is a solid-state Test Card C electronic test pattern generator. This is a very practicable project and could be built into a case not much bigger than two VHS video-cassettes. But, and this is a big but, we need someone with the necessary skills and apparatus to develop it for us: this is not an easy project. One of our group has these skills but not a lot of spare time: if all those of you who could make use of one of these wrote into me, perhaps I could persuade him this would be a worthwhile project! There would be development costs but hopefully we could spread these among us. Do let me know if you are interested - drop me a line or give me a ring. [AE]

PORTISHEAD MEETING REPORT

by Bill Journeaux

This event, the seventh "Aerial" vintage wireless meeting and stall sale, took place on Sunday 8th September at Clarence House, Portishead, near Bristol. As usual, it was well supported with over 150 enthusiasts in attendance. Among the more interesting television items offered for sale was a Pye LV20, also a Channel 405 line pattern generator and two Bush TV22 sets.

Displayed in the ante-room was the usual 405 line television section, run by Bill Journeaux and Terry Burnett with a number of vintage sets displaying suitable vintage programmes.

The next meeting will be held on the 3rd December 1989 and admission is strictly by ticket only. Further details from Mrs D. Roe, 7 Ashdown Road, Portishead, Bristol, BS20 8DP or telephone Bill Joumeaux on 0202-748072.

405 Alivers may care to note these meetings always have a 405 line signal source and they are always welcome to bring their 405 line sets to test or put on display.



FREE SUBSCRIPTION OFFER!

As you will see below, it's renewal time and I am having the cheek to demand money of you. Actually, I don't think £8 is unreasonable for so much unalloyed hard-core 405 material, especially with the free book as well, but as a further sweetener I am giving away a free subscription to the author of the best contributed article of the year (in the editor's opinion, that is). The cash value is no big deal, I know, but it is at least a mark of recognition!

The first award goes to ... (opens envelope with unsteady hand) ... Paul Sawtell for his detailed articles on test card music. I think he has amazed us with the amount of detail he has managed to set out in such a digestible form. We now look forward to more articles of this calibre. But even if you don't think you are in this league, shorter or more modest articles are just as welcome. We print everything! It is better if your text is typed but clear handwriting will do. We could do with more pictures - drawings and diagrams seem to reproduce better than photos. See what you can do, don't be hesitant!

IT'S RENEWAL TIME!

Dear 405 Aliver,

You play a very important role in our circle. Without you as a paid-up subscriber the active conservation and preservation of television history suffers. I am therefore asking you to renew your subscription NOW so that I can maintain continuity and make sure your next issue reaches you as soon as it is printed. 405 Alive has grown from a thin news-sheet to a regular 40-plus page read, and with your £8 subscription this can be maintained throughout next year.

I believe that £8 compares favourably with other special interest newsletters and I am convinced that 405 Alive membership pays, not costs. The contacts and good deals available through the newsletter alone are worth the dues. But we need YOU in order to continue all we are doing, so please send off your cheque today.

Many thanks,

Andy Emmerson.

BBC-2 AND THOSE WONDERFUL TRADE TEST COLOUR FILMS

by Malcolm Batchelor

Like many of your other readers, I adore early test card music, being fascinated by Engineering Tests and generally wallow in that period of Great British Broadcasting before "Daytime Television" came along and ruined everything.

Let me take you back 21 years ago to a typical day on DBC-2 in 1968 when the Colour Service was just in first gear...

9.00am and the day would start with a slightly adapted black and white Test Card C on vision with tone. At 9.05 the first of the half-hour tapes would commence. It could be any one of five, the first tune being one of the following: "Yankee Doodle Rag", "Going Up", "Pizzi Pizzi", "Highland Holiday" or "Nostalgia". 9.30: Tone. 9.35: the next tape until 9.58. This is when the duty announcer would tell us that Service Information for the Radio and Television Trade would begin in two minutes. A roll on the drum as the clock ticked away in time with Syd Dale's well loved "Walk And Talk".

At 10.00 the fun began... Captions at the ready... For this was Service Information for the Radio & TV Trade. Though I'd hazard a guess the audience was a lot larger than whom it was meant for, each bulletin would give information about Transmitters off-the-air or on reduced power, details of new Transmitters and Relay Stations, news about forthcoming events and exhibitions of interest to the trade, along with a brief recap then a run through of those wonderful Trade Test Colour Films being shown that day. All this would take anything from two to five minutes, then back to another tape this time accompanied by the magnificent colour test card F, interrupted for five minutes at 10.10 for a visual feast of Colour Bars.

The Trade Test Transmission is now in full swing as 10.30 approaches and a caption on screen appears reading "BBC-tv COLOUR RECEIVER INSTALLATION FILM". Yes, Paul Sawtell's long lost love, twelve-and-a-half minutes of good old-fashioned basic stuff on how to get it all together. In the closing words of the film itself... "To sum up, the aspects which need to be checked and occasionally adjusted when a colour television receiver is installed are provision of a good signal, standard preliminary checks, screen demagnetisation, colour priority convergence, reference white and grey scale and finally the viewer should be shown how to get the best results from their new colour television receiver".

Ah... those were the days, but what about those Trade Test Colour Films I hear you say. Fear no more. 10.43 draws near and following on from the Colour Receiver Installation Film a new caption appears... "BBC-tv TRADE TEST COLOUR FILM".

Yes, here it is, the first one of the day. Now depending on what month in 1968 you were watching you may have seen one of the following films: "Toe-Hold on a Harbour" about New Zealand; "Impressions of Expo '67" from Canada; enjoying a "Diesel Train Ride" from British Transport Films; or viewing a zany cartoon from France entitled "Villa Mon Reve" (My Dream House). Either way this would be a short, taking us through to a few minutes of Test Card F and music till

the lead-in to "Play School" at 11.00.

Now what can you remember here? Monday was "Useful Box Day", Tuesday "Dressing-Up Day" (that's where we went wrong with our kids!!), Wednesday was "Pets Day" and Friday "Science Day". But what was Thursday? Er... you mean you didn't watch it?!!

Back to Test Card F at 11.25 and then Syd Dale taking us into another Service Information bulletin at 11.30, following on with the second Trade Test Colour Film of the day which could be anything from a mouth-watering film about New Zealand apples called "Case History", "Birth of a Rainbow" about rainbow trout, a film showing the building of Liverpool's Cathedral called "Crown of Glass" or one of John Betjeman's superbly narrated National Heritage films "Beauty in Trust" or "Journey into the Weald of Kent", fond memories there. The film at 11.33 would tend to run for 15 or 20 minutes, taking us back to Test Card F then colour bars at 11.55 for five minutes, with music interrupted for 4 minutes of tone at 12 midday. At 12.10pm the second showing of the "Colour Receiver Installation Film" to 12.23, when back to Test Card F and music till 12.30 when the screens went blank and everyone went off for an extremely large lunch. Large because Trade Tests were not resumed till 2.00pm!!!

Into the afternoon then...

Testcard on Two at 2... with tone and music till 2.28 when Syd Dale takes up his baton one more time and it's the final Service Information bulletin of the day at 2.30pm. (4.30pm in latter years). The afternoon pattern takes shape with a Trade Test Colour Film at 2.33, the final showing of the day of the Colour Receiver Installation Film at 3.10 and then Trade Test Colour Films of a slightly longer length at 3.30, 4.30 and 5.30 generally 25 to 30 minutes in duration, ranging from the delightful "Giuseppina", a day in the life of a lonely Italian girl, the fascinating "Home-made Car", a new life in India in "A Peaceful Revolution", the story of "Paint" from the Shell Film Unit and "The Splendid Domain" showing how Canadians enjoy life.

After each film it was back to the Test Card F with music and tone and time out at 10 minutes past each hour for five minutes of colour bars. All this till evening programmes commenced or, during the summer months, cricket coverage was relayed on BBC-2 from 4.30pm. If BBC-2 programmes were to begin after 7pm then the final Trade Test Colour Film of the day would be transmitted at 6.30pm and would usually be selected from the 15 - 20 min. range. e.g. "How A Motor Car Works" from Shell, "Story In The Rocks" about paleontology. "Small Propeller" about a speedboat rescue service, or perhaps just "Colour Television" from Mullard (later replaced with "It's The Tube That Makes The Colour").

So that wraps up a typical "Daytime on Two" 21 years ago when Trade Tests were at their most active, and most enjoyable were "Those Wonderful Trade Test Colour Films..."

BBC TV TEST CARD MUSIC - a personal view in three parts

by PAUL SAWTELL A.M.B.I.I. M.P.A.

Part three - 1973 to 1983.

In the last article we arrived at the stage where a reduction in tape speed at the BBC from 15 ips to 7.5 ips enabled them to compile 60 minute (plus) sequences as opposed to the old 30 minute ones; another change was the disappearance of the BBC signal (the musical notes B, B and C, and finally the tone (1 kHz on BBC-1, 400 Hz on BBC-2) was transmitted every 15 minutes instead of every 25.

Although it was sad to see the end of the half-hour tapes as the format had stood the test of time, the new tapes were certainly very varied and exciting. All of a sudden there was a new system to get the hang of, and loads of lovely new recordings to make. Superb selections from great shows such as "Showboat", "My Fair Lady" and "Oklahoma!" were on offer on BBC-2 while on BBC-1 there were some Offenbach compositions as well as the usual mixture of lighter music.

September 1973 saw the end of the Trade Test Colour Films on BBC-2 having been transmitted regularly since 1954. It was decided that as there were colour programmes shown throughout the day on one or other channel the time available for transmission of the test card had been reduced. So, it was agreed with the TV trade that the available time on BBC-2 would now be filled with the test card and service information announcements. These would now be at 4.30 pm instead of 2.30, but would remain at 10.00 am and 11.30 am.

Around this time, they were becoming less regimental about tone transmissions - the "every fifteen minutes" routine soon gave way to every 25 again, then every 55. January 1975 saw severe reductions in the BBC-2 trade test schedule - apparently due to Auntie's diminishing reserves (and the need to conserve fuel) the BBC-2 network would now be off the air from 9.00am until 10.20 followed by test card at 10.30 until 2½ minutes before Play School at 11.00. The test card would then be shown (usually with tone, no music) until 11.30. The network would then close again until 15.50 followed by the test card at 16.00 until the start of scheduled programmes.

The only exception to this was if there was a break of less than two hours between programmes during the day (often this would happen during live coverage of political party conferences, educational programmes etc) when the test card and music would be transmitted. The other exception was Saturdays when they would transmit test card and music & programmes throughout the day. As if all this was not enough, in November 1975 after a period of ten months without any new tapes, someone had the bright idea of making the test card sound like nearly every other musical medium by putting together tapes of pop vocals! Fortunately this trend did not last very long! I say "fortunately" because I believe those who like pop music are very well catered for; the test card music was always something a little different and I could not see why it should suddenly have to be "brought into line" with Radio One!

All these vocals were "cover versions"; that is to say they were recorded by session singers based on the original records. As I said in the first article, the BBC test card music must NOT be available to the public on commercial records. However, there was a later vocal tape containing songs by Bread, Paul McCartney, Helen Reddy etc; anyone possessing the original commercial records would swear blind that they were identical to the tracks used on the test card!

Well, yes they were and no they weren't. Actually these were what we call "out-takes". That is to say that where a recording session takes place outside the UK many "takes" of a song will be done before the producer is entirely happy with one of them. That "take" goes on the commercial record and is sold to the public. However, by special agreement, the other "takes" not used can be transmitted by the BBC as "library" music; it fulfils the basic qualifications as the recording took place abroad and that tape is not issued to the public!

1976 saw the first fully classical tape on BBC-2; whereas BBC-1 had had several such tapes this was the first on BBC-2 not to contain any "light" pieces. In fact there were some tracks played by the woodwind section of the Norwegian Broadcasting Orchestra, which had featured on a BBC-1 tape in May 1975. This tape did not last too long, however, possibly because there was only one word to describe it - BORING! Although the music itself was good and the playing superb, it was a full hour of exactly the same thing! Rather like today's Ceefax tapes.

Well out of the "vocal" trend came a superb selection of tapes on both BBC-1 and BBC-2 in 1977. A beautiful mixture of classical and light, again with the odd "novelty" number thrown in for good measure. 1981 saw a lovely tape appear on BBC-1 much of which were repeats from the "good old days" of the 30 minute tapes. These were played by the Savoy and Siegfried Merath orchestra and it was 60 minutes of sheer delight - light music of a type seldom heard nowadays.

Television Presentation were always on the ball in those days, and when this country declared war over the Falklands, it was considered inappropriate to have "jazzy latin-american" music over the test card. So, the brief to International Recordings (the revamped Foreign Recordings Unit at the BBC responsible for collecting and compiling test card tapes along with many other duties) was to supply two tapes which were "sombre, but not too funeralistic". As it turned out the war was soon over, but the two tapes continued well into 1984.

March 1983 was as far as I am concerned, the end of the story; after transmitting a test card regularly since 1947 the BBC suddenly decided that on no account should a television set be set up on a test card. So, the first day of BBC-1's Breakfast Time was also the first day without Trade Test Transmissions. Ceefax pages were destined to rule instead. I think I could almost have coped with this if the music had not been toned down to sheer mediocrity. Apart from the occasional interesting tape the Ceefax scene has been a musical graveyard. In fact I am told that the BBC hardly ever compile a tape themselves these days but leave it up to the music publishers to do it for them!

So in conclusion, I believe the BBC test card has provided an invaluable platform for the work of many musicians, work which we would probably never have heard due to it not being commercial enough for general release. Tremendous variety of material; special tapes (two for Valentine's Day 1981; Christmas tapes since 1976; Falklands war tapes!) all superbly played and arranged. If someone asked me to provide a commercially

available record which would sound like test card music, I just wouldn't know where to start...

[A feedback letter on fascinating article is to be found in issue 5. A few copies are still available from the address on the back cover, price £2.50.]

The author would be very happy to hear from anyone who shares an interest in this subject, also from anyone who would like to swap info, recordings etc. Write to Paul Sawtell, 20 Seymour Road, Stourbridge, West Midlands, DY9 8TB. Or you may telephone 0384 - 896679.

SPECIAL ANNOUNCEMENT

Following much recently declared interest in BBC test card music, it is hoped it may be possible to hold a test card music convention some time next year. It is very much in the early stages of organisation at present but it is believed this will be a unique opportunity for all those genuinely interested in this music to get together. Would anyone who is interested please contact me at 20 Seymour Road, Stourbridge, West Midlands, DY9 8TB, enclosing a SAE to receive further information as it becomes available. [This event was a great success and has been repeated annually since then; it also spawned the Test Card Circle, the address of which is on the rear cover.]

October 1989 ELECTRONICS WORLD + WIRELESS WORLD



Adele Dixon opens the world's first public television service from Studio A at the Alexandra Palace on November 2, 1936. AP's heritage is now under threat. (Photo: BBC)

Ally Pally threat

The cradle of television broadcasting, the Alexandra Palace in north London, may not after all have its old BBC studio space converted to a television museum because of the high cost of the plan. 'Ally Pally' as it is affectionately known, was badly damaged by fire in 1980 but its owner, Haringey Council, decided in

the public interest to restore the building at a cost of £45M, work which is nearly completed.

The south east wing, home of the world's first regular television service, was not damaged by the fire, and its use as an exhibition of television history and development was proposed by the

Royal Television Society in 1985, as the BBC was about to celebrate the 50th anniversary of its television service. However, the proposals were costly and the television industry did not commit sufficient funds. The position has remained uncertain ever since. It now seems that Haringey Council may offer the studio area to Mountview Theatre School for scenery storage.

Another plan, for a Birth of Broadcasting Centre, run by a full-time staff and costing around £3M to set up, has been put forward by the Alexandra Palace Television Trust. The Trust comprises members from the broadcasting and equipment industries, and those who were there at the birth of television in 1936.

Their work should not be lost. But the future for the museum seems uncertain unless a scheme can be found which could complement the present day uses of Alexandra Palace, and meet the need for economic viability. This might mean a more modest start to the project, with an expenditure counted in thousands instead of millions, staffed on an occasional basis, say when other events are staged at the new Alexandra Palace.

The Ally Pally Trust can be contacted at 1 Coleridge Gardens, London NW6 3QH.

— Roger Driscoll

Christmas on BBC TV

With only a few more DX-ing days to Christmas we thought it would be a good opportunity to take a look at some of the special captions used on BBC-1 and BBC-2. The now discontinued Test Card "F" has also seen various changes during festive seasons. Alas, it is rather doubtful whether we shall see any further high jinks with the test card this Christmas unless the engineers at Television Centre in London have plans to interrupt transmission of sample Ceefax pages. One can but hope !

BBC-1

In 1980 the familiar BBC-1 Globe caption was replaced by figures skating around a central snowman (see Fig.1). This caption was rather ingenious in that during the day the skaters were shown racing around on a bright, crisp winter's morn. When it was used to link evening programmes the background was dimly lit and for late evening programmes the moon and stars were shining brightly.

In 1981 the BBC-1 Christmas caption consisted of no less than five small globes of various colours and sizes (see Fig.3) and resembled decorations on a tree. This was certainly one of the most colourful Christmas captions to be used.

Last year's caption was less colourful but very complicated. It is depicted in Fig 4. The twelve "limbs" of the snowflake revolved, each catching the light but not each other ! Probably it was all done by mirrors but 10 out of 10 to the designers for inventiveness.



Fig.1 1980 CHRISTMAS SKATERS



Fig.2 NOCTURNAL SKATERS



Fig.3 1981 CHRISTMAS GLOBES



Fig.4 LAST YEAR'S SNOW FLAKE

CHRISTMAS TEST CARDS

1980 was a very good year for test card frivolities as Figs 5 to 8 show. Fig 6 is a close-up of the centre circle displaying a Christmas pudding perched on Carol's table. It wasn't there for long - perhaps the engineers scoffed it for lunch.

All these additions to Test Card "F" were seen on Christmas Day. On other occasions the test card has been radiated with a completed game of noughts and crosses, the word "COLOUR" in a bright cheery yellow and "Merry Christmas" superimposed over the letterbox area. Even the entire central display area has been replaced by an electronic replica!

Test Card "G" received the festive treatment in 1981 when large red identification edged with white was used for a brief period.

BBC-2

A large rotating snowflake was the theme for the 1980 BBC-2 Christmas caption. It was made from glass (or perhaps plastic) and rotated steadily (well, almost) between programme junctions. The caption is shown in Fig 10.

The three revolving candles (see Fig. 11) were first transmitted on December 24th, 1981 and remained in service for five days. A suitable festive jingle accompanied the caption at the start of each programme opening sequence.

Last year's special caption consisted of



Fig. 5 TEST CARD 'F' WITH HOLLY OVER THE LETTERBOX



Fig. 6 CLOSE UP OF CHRISTMAS PUDDING

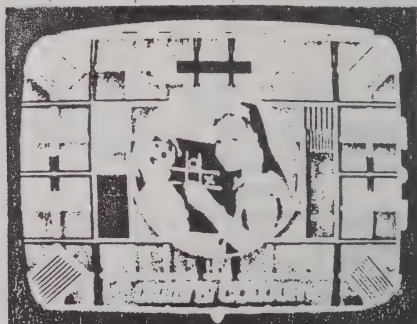


Fig. 8 TEST CARD 'F' WITH CENTRE REVERSED

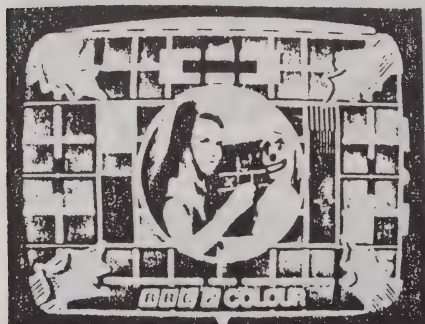


Fig. 7 HOLLY, NOT FOCUS BARS, IN 1980

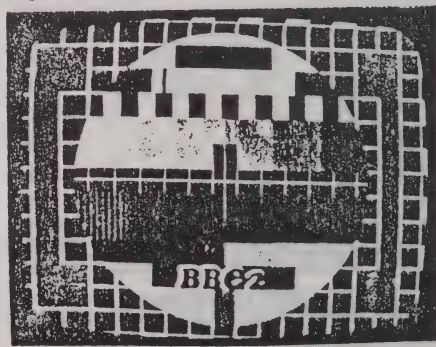
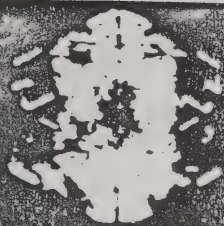


Fig. 9 COLOUR TEST CARD 'G' WITH LARGER THAN LIFE IDENT



**CHRISTMAS
BBC2**

Fig.10 : This large snow flake was used on BBC-2 back in 1980. The material used for this caption proved to be popular with the designers as a similar medium was used for the following two years.



Fig.12 : In 1982 the theme for Christmas was a set of three revolving trees. We shouldn't have long to wait to see what the theme is for 1983.

three green glass trees which revolved somewhat erratically at times. In fact one of the trees looked as though it could have been prematurely felled given a slight puff of wind ! The caption first appeared on Christmas Eve in gleaming, pristine condition but by the 28th there were one or two smudged finger prints on at least one of the glass evergreens.



Fig.11 : The three candles complete with green holly revolved steadily in 1981.

There are other examples of unusual captions and test cards shown at Christmas, some of which appear in the January 1984 edition of "Television".

We are planning a short article about BBC Schools Television captions so if you have any photographs please send them to TeleRadio News.



The above article first appeared in the long-distance television (DX-TV) magazine, *TeleRadio News* in December 1983. Since then, the digitally generated Test Card "F" has been radiated on several occasions at Christmas with various amendments and so the tradition of festive test cards is still carried on by some engineers at Television Centre!

FIRST it was a music hall,
SECOND it was a cinema,
LATELY B.R.M.B. radio studios.
BUT, once upon a time, it was **Alpha Television Studios at Aston,** says *Frank Peplow.*

It was the Midlands home of the ABC and ATV television companies: ATV - Mondays to Fridays and ABC - Weekend television.

There were three main studios of various sizes, plus an announcer's studio situated in the Master Control Area. Alpha Studios were jointly owned and operated by ATV (now Central) and ABC (now Thames Television). It employed and shared most of the people needed to produce a show from its studios. Up until its closure in the late 1960s, it was the oldest established ITV studios in the country.

During late 1968 or early 1969, I visited the studios with my parents to watch a live programme that was popular at that time - The Golden Shot with Bob Monkhouse!

If you can imagine a cinema with the balcony seating, no stall seats - but cameras, lighting and microphones together with performers and the studio floor slightly raised, it will give you a good idea of what it was like at that time.

ABC left in 1968 after losing its franchise, and ATV remained until their own studios in Birmingham city centre were built, in readiness for the launch of 625 colour studios on the entire ITV network in November 1969.

The building remained derelict until 1974, when B.R.M.B. moved in and have remained there to this day.

THE GOOD OLD DAYS (1953)

Glasgow Licensing Court has approved TV in city pubs. This decision opens a market for something like 1,100 TV sets. Ruling says that the sets must be in a room other than the public bar, must be operated in normal lighting and must be handled only by the licensee or his staff.

And now for those of you who, like me, were always puzzled by a mystery programme which never appeared in the TV Times, here is the explanation, courtesy of Frank Peplow ...

MONDAY'S NEWCOMERS

Every week, it was felt that the advertising industry should be allowed to preview the new advertisements that were due to be released on the air for the first time ever.

The time selected for this was 10.00 a.m. (I think). No announcements in sound were ever made - but a caption explained that "Monday's Newcomers", as they were called, were about to hit the screen. They started with 60 second commercials, then reduced them to 45 seconds, then 30 seconds, 15 seconds and 7 seconds.

Some commercials would appear to be shown over and over again but, looking back, some did have slight differences in them. Perhaps this was the idea of it all - to show only the best ones in the normal commercial time slots.

After the last 7 second commercial had been shown, a filmed announcement simply read:

MONDAY'S NEWCOMERS
THE END.

Then the picture faded to Black and normal trade test transmissions were resumed.

EXPRESS ADVERTISING FOR TV, 1937 STYLE

by David Lazell

"To advertise television in a national newspaper which circulates throughout the British Isles at a time when television programmes operate only within the London Service Area, would have been waste of money," declared the HMV dealer's magazine (**The Voice**) in December 1937. True, but dafter things happen in satellite television.

The story of the promotion of television to the nation is a fascinating story, and some aspects of the copy would not be unfamiliar in our Sky TV age. **The Voice**, approximately quarto size, was published monthly, using black and white pictures, plus features, to generate business go-getting among dealers. Thus, in the later 1930s, it was more likely that you would come upon promotions for radiograms than mention of television, but, as already indicated, the Christmas business of 1937 was somewhat television oriented.

The Daily Express, a broadsheet at the time, was used for a split-run advertising campaign, whereby copies distributed in the London TV area included a full page advertisement for television, whilst copies destined for lesser parts of the nation had a swap, using a full page promotion for radiograms. There is a connection, by the way. When I lived in Bridgend (Glamorgan) in the early 1950s, a genial neighbour used to play Frankie Laine and Mario Lanza records on his radiogram while looking at his television set, sound turned down as the drama had somehow lost his attention. Stray callers, seeing what they thought was television for the first time were, dare I say, bemused. The full page advertisement, included in some 700,000 copies of the Daily Express, was introductory in the style of Sky TV and BSB advertising, with the headline: "TELEVISION FOR £1 A WEEK... What does it bring you today?"

About a third of the page was taken up with a repro of a boxing match, as seen on television, and below this, three miniature pictures of HMV television sets. Readers were promised "absolute clarity", and the body copy, in rather small type one must admit, mentioned various attractions, the type matter relieved by an inset pic of the Alexandra Palace TV mast.

At the foot of the advertisement, a "please fill in and post" coupon invited readers to enquire for further details. Thus, on Friday November 19th 1937, Britain's first full page advertisement for 405 line television was produced. The *Voice* ran a nice piece about the way that the "thirteen giant presses" at the Daily Express, and the careful scrutiny of members of the Circulation Department ensured that the right issues went to the right distribution, including the trains that left London for the nether regions of Britain at about 3 a.m. Mr L. Needham, the then advertisement director of the Daily Express and Mr A. S. Radford, advertising manager for HMV, were photographed "checking the first copies of the television announcement at 2.30 a.m." whilst an art paper "pull" of the advertisement was used for subsequent publicity purposes.

Today, of course, advertising agencies do this sort of thing without blinking an eyelash (split advertising runs, that is - but then I write as a former copywriter who once did dockyard cranes as well as pianos, in the matter of publicity). Only a cynic would suggest that people beyond Bamsley might have liked to see the television advertisement, too, if only as a promise of good things to come. As they say, if there's anything good going, you can be sure the London folk will make sure they get hold of it.

Incidentally, dealers in the London area took television seriously, and sometimes arranged quasi-concert occasions (television showing plus neat sandwiches) in their heavily carpeted showrooms. But to afford a quid a week for television in 1937 meant that you were somewhat well-heeled, anyway. Some enthusiasts built their own television sets, though this aspect of garden shed hobbyism is somewhat overlooked. But if you could not afford television, and the parlour was too small for a radiogram, you and the missis could always go to bed early. Some radio dealers also sold prams.

Radiospares Ltd.
FOR ELECTRONIC COMPONENTS-BY RETURN



TEST PATTERN AND CAPTION SLIDES: A BRIEF NOTE

Some of you will be aware I am assembling a collection of these, which will be put onto videotape next year [well, one day]. In the process of researching and collecting these I have come upon a few odd facts which may make the eventual tape a little clearer. Until the (recent) development of solid-state (all-electronic) frame stores and caption generators, slides were the most flexible means of generating still pictures and messages in television.

Most ITA stations were supplied with a standard set of slides. The reason is that the Marconi company supplied transmitters to the IBA on a "turnkey" basis, in other words the customer just plugged the thing in, turned the key and it was all ready to go. With each station came a set of standard apology captions (you know the sort of thing, normal service will be resumed as soon as possible, etc.) and some still pictures of landscapes. Generally, each ITA transmitter would transmit the still picture for a period each day, then cut to black and show Test Card C instead. The picture chosen changed from day to day and they ceased showing these just before Test Card C was replaced by D.

Incidentally, you may have wondered, as I used to, why they provided the message "An Announcement in Sound is now being made"; after all this would be pretty obvious when you heard the announcement. The reason is that many TV shops would have the sound on their sets turned down and if a TV station had to leave the air for any reason, they might miss the announcement and then find blank screens on their sets. The visual caption would (hopefully) alert someone to turn up the volume! [AE]

THE STORY OF G3CTS/T

by Andy Emmerson

In Britain very few private television stations have been permitted to broadcast signals: in issue 3 I described one and here are details of another.

During the early 1950s the Television Society, now the Royal Television Society, took the progressive idea that it could stimulate technical development of television by operating its own television station. Here is a brief summary of events, taken largely from contemporary reports.

1952: Technical description of the Television Society's proposed transmitter in **TV** (vol. 6, no. 11, pp 442/3).

January 1953: G3CTS is the station of the Television Society, soon to be installed in the Norwood Technical College, South London. Full coverage of the London area, except to the south and east of Norwood, is expected with,

initially, 25 watts input to a QOV06-40 PA. London readers may like to start constructing a converter for 427 Mc/s in readiness to receive transmissions from this station. The sound channel will be on 424.5 Mc/s, so that both sound and vision will be capable of reception on a standard TV set following the converter. [RSGB Bulletin].

March 1953: Television Society's Exhibition. The Television Society's exhibit consisted of a television transmitter designed for propagation tests at 427 Mc/s, using the standard 405 line video waveform. [PTV].

June 1953: Society's Own Transmitter. In an effort to increase the export of British television receivers, the Television Society will build its own transmitter for the broadcasting of sales propaganda programmes to the Continent. [PTV]. (While this sounds an excellent idea, it is more likely that someone had got the wrong end of the stick here and propaganda was a misunderstanding for propagation!)

July 1953: An experimental 405-line transmitter for television students has been built by the Television Society at Norwood Technical College to operate on 427 Mc/s, with a peak power of 12 watts. The College syllabus includes television training, but besides providing a demonstration for students, the transmitter will serve as a test signal for members interested in ultra high frequency reception. The call sign is C3CTS/T and is expected to put a signal on the air by the end of this month.

In collaboration with the radio industry, the Society has under consideration a 625 line transmitter, which will enable commercial receivers built to Continental standard to be tested under working conditions. It is not intended that either transmitter should, at any time, operate as a commercial station. Their construction has been undertaken solely as part of the Society's policy of aiding the development of television technique. [TV News].

May 1954: G2WJ/T [amateur station at Dunmow, Essex] has received test bars from the Television Society's station G3CTS/T at Norwood.

July 1957: The transmitter of the Television Society is now in operation at Norwood Technical College. It has the dual object of providing a service to the radio industry for testing Band IV reception and providing a means of training students. It is hoped that in the future it will be possible to televise the lectures given at the college. The TV Society has just held its 28th AGM, when it was stated that transmissions would take place on Mondays, Wednesdays and Fridays, from 7pm to 9pm, with Test Card C and a tone. [PTV].

1963: The Television Society transmitter at Norwood Technical College is now in action, and regular weekly transmissions are being made. The operator is Martin Salter G3RJO/T, who is a BATC member as well as belonging to the Television Society. Vision frequency is 430 MC/s and sound is on 426.5 Mc/s. For further information contact Mr Rowlands (senior lecturer) or G3RJO/T at the college. Reports of reception will be most welcome. [CQ-TV 50].

1964: Norwood Technical College have added a two stack 32 element array on a rotator and hope to start tests again soon. G3RJO/T looks after the station, G3CTS/T. [CQ-TV 52].

October 1965: A description of amateur TV station G6CTS/T. The station is currently being used in the training of some fifty full time Diploma Course students and a number of part-time day and evening course students attending Television Technology classes. The vision transmitter ... on a frequency of 430

Mc/s ... uses a ... power input to the final stage of 150 watts. Sound power of is 45 watts input to the final stage, using 426.5 Mc/s. There are two sets of aerial arrays. G6CTS/T has a 10-element broadside array for each transmitter, directed due north from a site giving line-of-sight over London. Driving is via surface wave feeders. There is also a 16-over-16 slot element broadside, rotatable, with a range of 30-40 miles in standard conditions. ... The facilities at G6CTS/T also include CCTV for college programme presentation ... in collaboration with other Departments of the college.

Despite appeals in RTS publications and further research I have been unable to establish whether G3CTS achieved what it set out to do. It appears to have been used for amateur television experiments, but whether broadcast transmissions for trade test purposes were made is unclear. Feedback would be most welcome.

What, you may ask, became of this pioneering TV station? The answer is nothing... one day about 20 years ago the vandals got in and smashed everything in sight. And that was the end of G3CTS (except that the college still holds the callsign). Shame.

Bibliography

CQ-TV = CQ-TV, the magazine of the British Amateur Television Club.
TV = TELEVISION, the journal of the Television Society.
PTV = PRACTICAL TELEVISION.

MEMOIRS OF A TELECOMMUNICATIONS ENGINEER

*by W.J. Bray, CBE, M.Sc., F.Eng., FIEE, FCGI.
(Former Director of Research, Post Office).*

It is often forgotten that the Post Office played a major role in the development of television facilities, just as British Telecom does today. Equally, it is not often we have a chance to hear stories "straight from the horse's mouth", so I was pleased that Mr Bray allowed us to quote from his memoirs. The complete book describing his career from the 1920s to 1975 is just as fascinating and is available from him for £7 plus £1 post and packing. The address is W.J. Bray, The Pump House, Bredfield, Woodbridge, Suffolk, IP13 6AH.

The first TV link to South Wales

The reopening of the BBC television service in June 1946 and the need to relay the television programmes to provincial television transmitters, initially at Birmingham and Wenvoe, South Wales, stimulated activity in the Post Office on both coaxial cable and radio-relay systems for television transmission. The cable

engineers, notably Dr R.F.J. Jarvis, Dr R.A. Brockbank, T. Kilvington and H.T. Mitchell, were active in developing repeated 3/8-inch diameter coaxial cable systems, and a still more ambitious 1-inch diameter coaxial cable system for the London Birmingham route. Meanwhile the radio engineers, including J.H.H. Merriman, R.W. White and myself, were exploring the radio-relay system possibilities,

feeling no doubt that they had a more tractable medium than the coaxial cable which required very precise amplitude and phase equalisation for satisfactory television transmission.

In the immediate post-war period our resources in the radio field were limited and it was decided, as a first step, to see what could be done with a VHF-FM system.

The BBC television transmitter at Wenvoe, near Cardiff, was due to open in March 1949, and although a 3/8-inch diameter coaxial cable system was being installed between London and Cardiff, there were doubts as to whether it would be ready in time. Fortunately, the Post Office Research Branch at Dollis Hill and the Post Office Radio Laboratory at Castleton, South Wales were on the route, and it was decided to link them by a five-hop radio-relay system using hill-top sites.

This experimental system was designed initially to operate on a single frequency of 195 MHz on all hops. The aerials used were horizontal rhombics, the receiving and transmitting aerials at each site being located on opposite sides of a hill-top. It had been calculated that the back-to-back attenuation between the rhombic aerials, together with the diffraction loss around the hill-top, would avoid instability or undesirable echoes. The use of a single frequency for all hops in principle enabled straight amplifiers to be used as repeaters, i.e. without frequency changing. In the event, difficulties were encountered on some sites in achieving the desired attenuation and these were later converted to microwave operation, using reflex klystron oscillators as transmitters.

This experimental part VHF, part microwave, system was in fact made ready in time for the Wenvoe transmitter opening, but

not without problems in so doing.

There was, for example, the horse that strayed into one of the relay station huts at Green Hailey in the Chilterns - much to the consternation of the system control operator at Castleton who could not believe his ears when so told!

A few days before the opening of the Wenvoe transmitter was due, serious pulse-type radio interference was observed on the 195 MHz radio link. Ground-based Post Office radio interference locator vans had failed to locate the source of the interference, which appeared to come from air-borne sources.

With admirable initiative my Post Office colleague R.W. White at Castleton, with my authority, promptly hired an aircraft and equipped it with simple VHF DF equipment. This was completely successful in tracing the interference to Royal Air Force aircraft using distance-measuring (DFF) equipment in a frequency band nominally allocated for civil communication purposes. However, R.W. White's problems were nothing compared with mine in justifying to higher Post Office authority the hire of the aircraft.

We also had our difficulties with Mr George Bernard Shaw, supported by John Betjeman, who had written to the Times newspaper complaining about the desecration of the White Horse Hill in Wiltshire by aerials erected by Post Office vandals. This, notwithstanding the fact that the aerials in question were low, screened by trees and barely visible from most view-points, and ignoring the much more apparent eyesore created by rusty corrugated iron barns in the near vicinity.

Nevertheless, the London - Wenvoe experimental radio-relay system served a useful purpose in enabling the Post Office to gain valuable experience with both VHF

and microwave techniques, and in enabling the BBC Wenvoe transmitter to open on time. This was followed by a UHF (900 MHz) radio-relay system for television, built under Post Office contract by the General Electric Company (UK), between a lattice tower on the Museum exchange, London and another at Birmingham, with intermediate repeater stations, which was opened in December, 1949.

These early VHF/UHF radio-relay systems gradually developed confidence that such systems could provide reliable transmission of television signals with a high standard of performance. They led the way to microwave systems operating on still higher frequencies, in regions of the spectrum where there was sufficient space for many systems and where the aerials, waveguide feeders and other components were more compact and convenient for operational use.

A Balloon-Supported Passive Repeater Aerial System (1947)

Being impressed by the logistical problems of providing national television coverage by ground-based television transmitters and links, I began to speculate in 1947 on the possibilities of a balloon-supported passive repeater system for broadcasting and relaying television signals, Fig. 11.2. This idea was no doubt at least partly inspired by the sight of the war-time balloon barrage that seemed to be an almost permanent feature of the London skyline during those years.

The proposal was to use frequencies above 1000 MHz (at which useful gain and directivity could be achieved by aerials of practicable size), with a combination of a downward pointing paraboloid reflector aerial at the elevated end for receiving signals from a similar paraboloid at

the ground, together with a bi-conical circular horn aerial at the balloon for broadcasting the signals omni-directionally in the horizontal plane but with some directivity in the vertical plane. Full coverage of the whole of the United Kingdom could have been provided by six such systems at heights of about 5,000 ft.

Since the aerial system was wholly passive and could have a wide frequency bandwidth it could be used simultaneously for broadcasting and for picking up signals from a similar system up to about 150 miles away, or from mobile units for outside broadcast purposes.

Clearly there were mechanical problems to overcome, e.g. due to lightning, gales and icing, but these did not appear insuperable; there were also possible hazards to aircraft that might have been more difficult to overcome. Such a system could have provided national coverage, not only for television and sound broadcasting, but also for a variety of other services including mobile services, at a far less cost than the present-day multiplicity of transmitters and connecting links, or even, let it be whispered, of future satellite systems.

A Home-built 405-line Television Receiver

Shortly after the end of the war I became a member of the MOD Panel for Allocating German Electronic Equipment, known as PAGEE. Its purpose was to allocate, as usefully and fairly as possible, the mountains of German radar and communications electronic equipment that fell into Allied hands in the latter stages of the war after the cessation of hostilities. The intended recipients of this no-cost bounty were, in the main, Universities and Colleges with

Departments of Electrical Engineering, Government Research Establishments and Industrial Laboratories. As an unauthorised reward for my personal war efforts I "allocated" to myself a nicely-engineered German radar. This provided a useful source of electronic components, a cathode-ray tube and an associated high-voltage power pack. With the aid of some circuitry derived from the "Wireless World" TV receiver design, a 45 MHz radar IF strip from the junk shops of Lisle Street, Soho, and components from the German radar, I built a 405-line television receiver.

It was lined up with a bare minimum of test equipment, the proverbial "wet finger" being the normal method for tracing faults, and the test-card from the BBC transmitter at Alexandra Palace the only source of test signal.

It was a tremendous thrill when the test card was replaced by the first of the resumed transmissions from Alexandra Palace - opened by the PMG on 7th June 1946. It vividly recalled the Mickey Mouse cartoon film that had been so abruptly shut down on 1st September 1939 just before the outbreak of war, with Mickey uttering the words "I t'ink I go home!". True, the picture was rather small, about 3 inches by 4 inches, and green in colour, but it gave much pleasure to the family and drew in neighbours for miles around as one of the very few TV receivers in operation in 1946. Also, it was a rather nice example of one particular sword being beaten into a plough-share!

The Post Office Television Receiver Detection Van (1952)

As the numbers of television receivers in use by the public grew into millions a serious and growing problem arose from the substantial proportion of receivers that were unlicensed and the loss to the BBC of

income from licence fees. Since the Post Office was then responsible for the licensing and collection of fees, it fell to that organisation to find a means of reducing the numbers of unlicensed receivers in use. In an attempt to scare the owners of unlicensed receivers into paying up the Post Office had hinted at the possibility of detection of such receivers.

However, in a Parliamentary debate in which the loss of revenue to the BBC was under discussion, the Postmaster General (then the Earl de La Warr) was challenged to prove that there was in fact a technically effective means for detecting working television receivers. Since at the time no such means existed, the Post Office and the PMG were in a position of some embarrassment. In an attempt to resolve the problem the PMG paid a visit to Dollis Hill and I was brought in to give technical advice. It occurred to me that there was a strong alternating magnetic field (which it would be difficult to screen) around the line-scanning coils of the television picture tube.

The line current in these coils has a saw-tooth waveform with a fundamental frequency of 10 kHz, and in view of the wave-shape was rich in harmonics. Whilst the PMG was still on his visit to Dollis Hill I hurriedly set up a crude detection system using a loop aerial connected to a National HRO receiver tuned to 20 kHz, the second harmonic of the line frequency. This receiver was one of the few capable of receiving such a low frequency, and it also had a local oscillator enabling the 20 kHz signal to be translated to an audio beat frequency.

By mounting the loop aerial and the receiver on a trolley and moving it gradually away from a working TV receiver it could be shown that the audio beat was detectable up to at least 75 feet, and that the strength varied approximately inversely as the cube

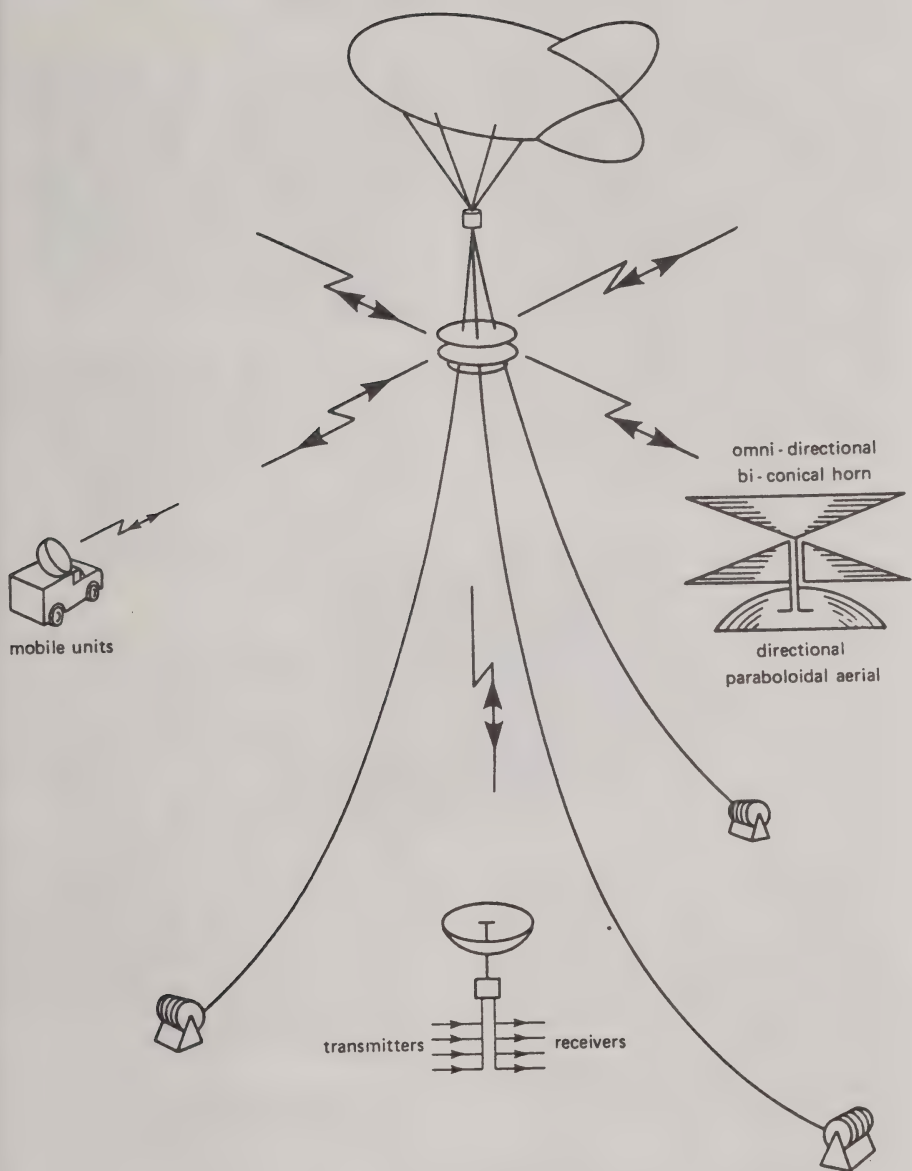


Fig.11.2 Balloon-supported passive repeater aerial system for the broadcasting and relaying of television signals (1947)

of the distance (as would be expected for a magnetic induction field).

Encouraged by these results a more sophisticated system was later set up in a Post Office van with three horizontal loop aerials in the roof and a switch enabling the received signal strengths to be compared* (Fig. 11.7). This enabled it to be said whether the TV receiver was to right or left, behind or in front, of the Detection Van. The PMG was given a demonstration of this equipment one evening on the roads of a housing estate near Dollis Hill. As the van passed each house it soon became apparent whether a television receiver was in use, the inverse cube law of signal strength versus distance enabling satisfactory discrimination between one set and another to be obtained.

The BBC gave a live TV broadcast demonstration of the Post Office TV Detection Van in an open space near its Wembley Laboratories, several tents being set up with a working television set in one of them. The game was of course, to locate the one tent with the TV receiver, but this demonstration nearly ended in failure until it was realised that the TV camera tracking the Post Office Detection Van was itself generating a powerful 20 kHz signal.

The fact that an effective TV receiver detection technique existed, backed by extensive publicity from the BBC, the Post Office and the Press, undoubtedly had a powerful effect in reducing the numbers of unlicensed television receivers and augmenting the BBC income by many millions of pounds over the years - I only wish I had bargained for a mere five per cent commission on this additional income.

** Described in "The Detection of Television Receivers", by W.J. Bray. Post Office Electrical Engineers Journal, Vol 45, Part 2, July 1952.*

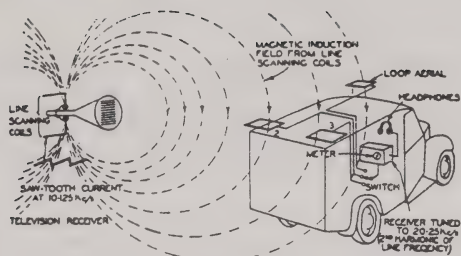
First Inter-Continental TV Link, 1962 (extract)

Our friends in the ITA had provided a crate of the best French champagne; however, with our difficulties on the 10th of July we had not the heart to open it. These inhibitions rapidly disappeared with the successful events of the 11th July, and it will be well understood that by the early morning of the 12th July the Post Office Satellite Ground Station at Goonhilly was very nearly air-borne!

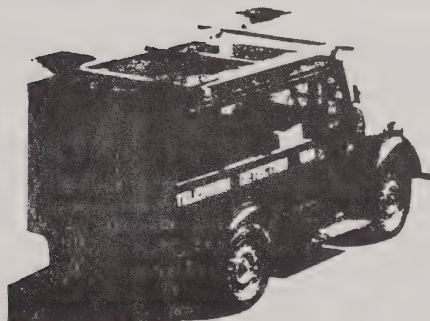
I remember being very much impressed by the skill of Raymond Baxter as an interpreter who for the benefit of the viewing audience and only minutes before he was due to broadcast, translated my somewhat involved technical explanations of our problems and expectations into pencilled notes on his shirt-cuff, which became elegant, simple and smooth flowing English in the actual broadcast.

At the conclusion of the first historic television transmissions to and from the United States I noticed a remarkable phenomenon. A BBC television camera was looking at a Post Office television picture monitor in the control room at Goonhilly. There depicted was an "infinite regress" of pictures, akin to the effect of parallel mirrors, the pictures getting smaller and smaller as they receded into the distance! The picture signals from the BBC camera were being transmitted via the ground station transmitter to the Telstar satellite, back to the ground station receiver and the Post Office television monitor, and then round this loop again and again.

DF= direction finding
PMG = Postmaster General



Principles



Detection Van

Fig.11.7 Post Office Television Receiver Detection Van (1952)

STRANGE BUT TRUE

Here's a funny piece of nonsense I was told almost 20 years ago: it was supposed to be true and indeed I do not doubt that ...

Some wicked student types at Oxford university noted that the local BBC TV relay station was on a time switch and shut down every night at, say for the sake of argument, 11.30 pm. However, the mechanism was clever enough not to do this if it detected a carrier (i.e programmes still continuing) at, say, 11.29 pm. In this case it would then stay on the air until the carrier dropped and then cut off power and remain off the air until switch-on time the next morning.

This gave the students an idea. Oxford took its signal from Crystal Palace, and if they chose a night when programmes finished before 11.30, they could generate a (quite low-powered) carrier on Channel 1 (I'm not sure whether Oxford monitored the sound or the vision frequency) and transmit this some time after programmes ended but before 11.29. In this way they could fool the Oxford transmitter and keep it on the air. By waiting a while and transmitting a blank carrier they would not draw any attention to themselves and in any case, most people switched off when the national anthem was played, if not long before!

However, at a set time - about 1 am - they could then start transmitting their own (sound) communications, when their student friends were listening and nobody else was! Smart, huh?!?

Nowadays, it is not so easy to hi-jack a TV transmitter (authorisation codes are transmitted in the vertical interval) but it would be interesting to know if anyone else used the good offices of the BBC for their own purposes! And no, I didn't go to Oxford university, so it wasn't me! [AE]

2. And this is definitely true. Out of a magnificent total of 101 of you 405 Alivers, no fewer than 11, that is more than 10 per cent, come from the West Midlands. No other area has such a high concentration, not even London, so is there something special in the Birmingham water which affects people in this way, or is there some other explanation. It has been suggested that there's nothing else to do in Birmingham, so everyone has to watch television, but that seems hardly fair!

[Actually, it was later suggested - very convincingly - that the high prosperity of the West Midlands in the immediate post-war era and the opening of the Sutton Coldfield transmitter in 1949, before other regions of Britain, combined to impress television on the consciousness of Midlanders. The distance from the seaside and cost of alternative entertainment may also have had something to do with it.]

IN MY WORKSHOP

by David Boynes

David seems to leave the workshop only to write letters to us - how does he do it!?! Anyway, here's the latest news from the land of Tyne and Wear ...

The Marconi VT50 TV is now working, however, I must find alignment instructions for this model as many of the IF transformers will not tune properly. I did have problems with the local oscillator. The 40pF tuning capacitor across the centre-tapped coil was low-capacitance and the local X81 valveholder has intermittent contacts and may have to be replaced.

The timebases work well, giving adequate scan and good linearity. Both line and frame holds are excellent and the timebase oscillators are drift-free. The CRT gives a bright picture: the tube is a TA10, a replacement for the pre-war type 3/5. The EHT voltage is 5000 volts, mains-derived from a separate transformer.

A feature of this set is that this transformer can be switched off and the set operated for sound only.

I think this could be a good model for the first "Receiver Profile" in 405 Alive, bearing in mind the set is based on the 1939 model 712. I have seen pictures of the 712 in the Wireless World and it appears that both models share a similar cabinet style.

Now this concerns SAFETY, and that means YOU!. Many younger enthusiasts may not be aware of the dangers of mishandling tubes, in particular the old round types found in early TVs. I must also one stress the dangers of mains-derived EHT systems. When handling these tubes eye protection should be worn and tubes must not be left lying around, they must be stored in boxes. [The glass is surprising fragile and can implode without any provocation or warning. Bits of glass flying around at high speed can be DEADLY.]

Secondly a reminder of the dangers of mains-derived EHT systems found in pre-war and some early post-war sets. These systems ARE lethal, so treat them with respect. Use an EHT meter, mine is a Rank-Bush-Murphy supplied to me some 17 years ago for colour TV. If any difficulty is experienced in finding EHT valve rectifiers like the HVR2 or U16, try using silicon diodes like the BY140 or BY182 and wire in a series resistor of 3,300 ohms 1/4W for safety.

Thirdly, remember when using a chemical paint stripper on cabinets always use these out of doors to avoid breathing the harmful vapours. [Dave says you don't notice it at the time but these fumes can make you feel really bad for three days afterwards if you're not careful.]

Lastly the oil used in transformers like the ones found in Murphy sets and EHT triplers in projection sets most likely contains PCBs or Poly Chlorinated Biphenols. [This is the stuff the environmentalists are so worried about - if it leaks it is very nasty stuff and you must not let it get into contact with your skin. Its use is banned nowadays - make sure none of it weeps out, else you run the risk of skin cancer and horrible things.]

On page 3 of issue 2 Mr P Thorpe wrote about his Pye FV1 receiver: I

bought my FV1 twenty-nine years ago in May 1960 for £5. At present it is suffering from low vision IF gain, displaying very weak pictures even though the output from the David Looser modulator is 100mV.

Finally, I have tried the Ferguson 3V44 video recorder for recording and playback of 405 material. It gives good results but the ghost is present. Also the Panasonic NV370 records and plays back 405 extremely well.

NOTES AND QUERIES

9. Around what time were the channel 1 transmitting aerials removed from the tower structure at Alexandra Palace?

FEEDBACK ON ISSUE 3

From Paul Sawtell (who makes these points purely in the interest of accuracy and in no way wishes to detract from the original articles):

Colour TV Experiments - although the author says "From 1957 ...", it is perhaps worth mentioning that the film "Home-Made Car" was not made by BP until 1962!

Test Card Saga - Keith does not mention that the easiest way by far to record tapes to the end in the early sixties was to wait until the afternoons when the tapes were played regionally and were almost without fail played right the way through to the end! Also there were few tapes 1960-1963 which lasted the full 30 minutes; most of them lasted between 24 and 28 minutes. I don't think Keith is the only person to have a more-than-keen interest in at least the music! I too remember the Chopin Polonaise in A Flat and recently had the pleasure of supplying Keith with a recording of this tape.

Pictorial Slides for Trade Test Transmissions - Alan Keeling amplified his letter in the last issue to say that both the BBC and the ITA ceased transmitting these views at the same time, just before Test Card C was replaced by D. They were changed from one day to another and only one view would be used on any given day. At the appropriate time, the screen would cut to black and then the test card would come up.

Keith Rann points out that in the Southern Television area, the ITA used a slide of Corfe Castle.

CAN'T WAIT ANOTHER TWO MONTHS ...

... for the next issue? Well, why not build up your collection of back issues? Most of the information in them does not date at all, and if you enjoyed this issue you are bound to enjoy the previous ones as well. Most back numbers are in stock (and are reprinted in batches when they are exhausted). Issues 5 to 12 cost £2.50 each, while numbers 1 to 4 are available in a single volume for £5. Inland postage included, add 50p for overseas.



The Home Secretary, in a written reply in the House of Commons earlier this year, made a detailed statement about the closure of the 405-line television services and the further extension of the 625-line service.

His statement began: "The 405-line v.h.f. television services of the BBC and the IBA transmit BBC-1 and ITV in black and white only and are now substantially duplicated by the 625-line u.h.f. services which transmit BBC-1, BBC-2 and ITV in colour, and which will in due course transmit the fourth channel service. Phase II of the current u.h.f. engineering programme for extending the 625-line services to communities with populations of 500 or more (over 99% of the population) should be completed by about 1984.

"The need to close the 405-line services in the early 1980s was recognised by the Pilkington Committee and the Annan Committee on the Future of Broadcasting. The manufacture of sets capable of receiving the 405-line services ceased some years ago and the transmitting equipment is rapidly nearing the end of its useful life. Substantial capital expenditure would be required to extend its life beyond the next few years and such expenditure on a duplicate and obsolescent service could not be justified.

"I have, therefore, agreed with the broadcasting authorities on a timetable for the closure of the 405-line services. Closure will begin in 1982 and will be phased over a period of about 4 years."

The BBC and the IBA are co-operating closely in the implementation of these engineering programmes in order to minimise any inconvenience to the public. As far as possible they plan to close down their 405-line services in Bands I and III at the same time in particular areas, although this will not be possible everywhere since the BBC have 110 transmitters on 405-lines while the IBA have 47.

Stations to be closed earlier in the programme will be those in areas where there is good coverage from the u.h.f. 625-line services. The last stations to be closed will be some of the high-power main stations in areas where 625-line coverage is less complete.

BBC Engineering Publicity, 1980.

THE BACK PAGE

405 Alive is an independent, not-for-profit magazine devoted to the study and preservation of old television technology and programming. It has no connection with, and is not subsidised by, any other organisation. Publication is at approximately three month intervals, normally in January, April, July and October.

Correspondence is welcomed: write to the editor, Andrew Emmerson, 71 Falcutt Way, Northampton, NN2 8PH. If your letter is not intended for publication please indicate this clearly. All letters are gratefully received and will be acknowledged in the next issue if not sooner. If you are expecting a reply you **must** include a stamped addressed envelope and preferably also your telephone number (in case it is quicker to telephone a reply) - thanks.

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BRITISH VINTAGE WIRELESS SOCIETY: Gerald Wells, Vintage Wireless Museum, 23 Rosendale Road, London, SE21 8DS.

BRITISH AMATEUR TELEVISION CLUB: Dave Lawton G0ANO, Grenehurst, Pinewood Road, High Wycombe, Bucks., HP12 4DD.

NARROW BANDWIDTH TV ASSOCIATION: Mr Doug Pitt, 1 Burnwood Drive, Wollaton, Nottingham, NG8 2DJ.

TEST CARD CIRCLE: Stuart Montgomery, 2 Henderson Row, Edinburgh, EH3 5DS.

IRISH VINTAGE RADIO & SOUND SOCIETY: Henry Moore, 9 Auburn Close, Killiney, Co. Dublin.

PROJECTED PICTURE TRUST (cinema history): Harrold Brown, 2 Eleanor Gardens, Aylesbury, Bucks..

We also read and recommend these other specialist publications of interest:

RADIO BYGONES, 9 Wetherby Close, Broadstone, Dorset, BH18 8JB.

THE RADIOPHILE, "Larkhill", Newport Road, Woodseaves, Stafford, ST20 0NP.

TELERADIO NEWS, 7 Epping Close, Derby, DE3 4HR.

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